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PUBLIC ATTITUDES TOWARD HAZARDOUS WASTE DISPOSAL
FACILITIES

HUMAN RESOURCES RESEARCH ORGANIZATION

PREPARED FOR
ENVIRONMENTAL PROTECTION AGENCY

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PUBLIC ATTITUDES TOWARD
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FOREWORD

Man and his environment must be protected from the adverse effects of pesticides, radiation, noise and other forms of pollution, and the unwise management of solid waste. Efforts to protect the environment require a focus that recognizes the interplay between the components of our physical environment--air, water, and land. The National Environmental Research Centers provide this multidisciplinary focus through programs engaged in

- studies on the effects of environmental contaminants on man and the biosphere, and
- a search for ways to prevent contamination and to recycle valuable resources.

In an attempt to solve the problems involved in solid waste disposal, this study investigated citizen reaction to the feasibility of the creation of a system of national disposal sites for the storage and disposal of hazardous wastes. Technical, economic, and social aspects were studied.

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ABSTRACT

This project had three purposes: (a) survey public attitudes toward a proposed system of national disposal sites (NDSs), (b) develop a behavioral model as a means of predicting citizens' reactions to an NDS in a particular location, and (c) propose an effective public information campaign.

The national survey, sampling randomly and purposefully selected respondents (key influentials), was conducted in 10 counties that were selected as feasible NDS locations. The questionnaire elicited information about three classes of variables considered predictive of citizen reaction to an NDS. These variables, (a) contextural variables (physical/economic environment), (b) situational variables (social environment), and (c) individual variables (personal attitudes/beliefs), constituted the basic structure of the behavioral model.

Results showed that most respondents have positive attitudes toward an NDS, would accept one in their county, and believe an NDS would be beneficial to their area. About 50% of the respondents wanted additional information before agreeing to a nearby NDS. Randomly selected respondents desired technical information, while key influentials were interested in economic, regulatory, and specific location information. Most respondents named the mass media (TV and local newspapers) as the greatest source of influence on their environmental and ecological attitudes. Lacking actual citizen reactions to an NDS as a real criterion for validating the behavioral model, an intermediate criterion variable (ICV) was developed. Results of an Automatic Interaction Detection (AID) analysis showed that two classes of predictor variables accounted for the predictable variance in the ICV. A generalized public information program designed to create public acceptance of NDSs is outlined.

CONCLUSIONS

The following conclusions are based upon the results of the national survey:

- The social climate for establishment of a national disposal site (NDS) system is positive. Most respondents expressed a favorable attitude toward the NDS concept.
- Counties differ in their probable receptivity to an NDS.
- National disposal sites are perceived as relatively nondangerous and potentially beneficial to the surrounding area.
- Accurate and adequate technical information is desired by most people before they agree to an NDS being located nearby. The preferred source of such information is mass communication media.
- Approaches to obtaining acceptance of an NDS need to be different for individuals influential in decisions concerning local issues than for the average citizen.
- While concerns voiced by most people regarding the area impact of an NDS can generally be countered by factual information, the affect (or feeling) associated with such concerns must be given specific attention.
- The proposed public information program would be likely to result in ready agreement to the establishment of an NDS in most locations.
- Even though actual reactions cannot be completely predicted from the present data, the model developed in the project should provide substantial assistance in the identification of most favorable NDS locations, insofar as citizen reaction is concerned.
- A behavioral model having greater predictive effectiveness could be developed, but would require an actual criterion and a larger sample of counties. The present model represents what the current state of the art can provide in the absence of a behavioral criterion and based upon only a small sample of counties.
- "National disposal site" proved to have undesirable connotations for many respondents and should be avoided as a term of reference for such installations. One acceptable alternative designation is "regional processing facility" (RPF).

RECOMMENDATIONS

Because of the observed county differences in probable receptiveness to an NDS, the selection of specific locations should involve use both of the behavioral model and of the logical extension developed for this project.

Introduction of an NDS to a specific location should include use of the public information program described in this report.

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Public Attitudes Toward
Hazardous Waste Disposal Facilities

Chapter I

INTRODUCTION

PROJECT BACKGROUND

A Congressional mandate in Section 212 of Public Law 91-512 included a direction for the preparation of a comprehensive report and plan for the creation of a system of national disposal sites for the storage and disposal of hazardous wastes. This directive required a feasibility study dealing with three aspects: (a) technical, (b) economic, and (c) social. This feasibility study served to delineate a number of research projects, one of which was concerned with the social aspects of such a national system. The present report describes the results of that project, which was conducted by the Human Resources Research Organization (HumRRO).

SCOPE OF PROJECT

The project had several purposes. The first objective was to measure present public attitudes toward the proposed system of national disposal sites. Attitudinal research already has been found to be a critical factor for successful implementation of solid waste management systems. There was good reason to expect similar criticality for national disposal sites.

The second purpose was to develop a behavioral model as a means whereby responses of people located near a specific proposed site could be predicted. Objections to previous systems have originated from individuals, organizations, and local governmental sources.

The third purpose of the project was to recommend the most effective approach to informing the public about the proposed system. The most effective approach was defined as one that would create support for such a national system by demonstrating its relevance and necessity.

RELEVANT LITERATURE AND CONCEPTUALIZATION OF THE PROJECT

The Nature of Attitudes

Attitudes have been a central focus of study and research within psychology for more than half a century. For example, Watson (1925) believed that social psychology could be regarded, more or less, as a study of peoples' attitudes. The importance attached to attitude research has decreased over the intervening period probably only because of the increase in knowledge of other psychological processes that have an important influence on behavior. However, as knowledge of these other influences has increased, it has provided the basis for putting the earlier work on attitudes into a more meaningful frame of reference.

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Allport (1935) regarded an attitude as a learned predisposition to respond to an object or class of objects in a consistently favorable or unfavorable way. It should be noted that this definition implies that attitudes can be measured in terms of favorableness-unfavorableness of reaction—a rather simple bipolar notion. On the surface, this appears to be a reasonable way to view attitudes. To the observer, an attitude does appear to be a positive or a negative feeling.

The difficulty, however, is that positive and negative feelings are not always acted out. Introspection confirms this. If one feels negatively disposed toward another person, what one does about it depends on who that person is. If, for example, that person is his superior in a workday organization, he may do very little about his unfavorable feelings. Thus, the degree of favorability a person feels toward an attitude object may be relatively inadequate to explain the actions he takes.

Beginning with the 1960s, a variety of investigators undertook development of more adequate theories for understanding attitudes and any effect they may have on behavior. These have taken the form of balance theories (Heider, 1958), dissonance theory (Festinger, 1957), affective-cognitive theory (Rosenberg and Abelson, 1960), assimilation-contrast theory (Sherif and Hovland, 1961), and additive theories (e.g., Fishbein, 1965).

What Constitutes Attitudes

It is beyond the scope of this report to discuss in detail the various theories of attitudes that have recently emerged. Most of these theories seem to have been stimulated by recognizing that there is no simple one-to-one relationship between measured attitudes and behavior. Common assumptions are that earlier attitude theories were inadequate, and that factors other than feelings also influence behavior. Thus, some theories have become considerably more elaborate in terms of what is included in the concept of attitude; other theories have attempted to deal with behavior more explicitly; still other theorists (e.g., Sherif and Hovland, 1961) have attempted to relate attitude formation and change to more general social psychological phenomena, as well as to psychophysical phenomena.

In general, the conclusion is that the attitude theory that works best to predict actual behavior is the one that is most comprehensive in its ability to deal with areas in psychology other than attitudes viewed merely as feelings. The theoretical approach taken in this project was a combination of what were considered the best ideas from a small number of the numerous theoretical positions mentioned earlier, with emphasis being placed upon the approach proposed by Sherif and Hovland. This proposed approach was an integral aspect of most of the later work by Sherif.

Sherif and Sherif (1967) outlined five characteristics, or criteria, of attitudes:

- Attitudes are not innate. To some extent, they can be viewed as motives, and, like motives, they are dependent upon learning.
- Attitudes are not temporary states. Once they are formed, they are more or less enduring.
- An attitude requires an object that is, people do not have attitudes about nonexistent things. Further, there must be a relationship between the person and the object.

- The relationship between a person and an attitude object generally is not neutral. It almost always has motivational or affective (emotional) properties. There is an implication here, that it is necessary for an object in the social environment to have relevance to the attitude holder in order for an attitude to exist. (Other attitude theorists will argue with this point. However, for present purposes, it is viewed as important.)
- The attitude (subject-object affective relationship) is developed through a categorization process by which the individual makes judgments about objects in his environment, categories to which they belong, and his positive or negative relationships to those categories.

While perhaps abstruse, these five points nonetheless have important implications for the development of behavioral models that can be used to predict reactions (not attitudes) of citizens toward hazardous waste disposal sites, and the kind of implementation strategy that most probably will result in desired reactions. Insofar as measurement is concerned, these criteria suggest that people do not have stable attitudes about objects which do not have personal relevance to them. This, in turn, implies that the measurement of attitudes of citizens toward hazardous waste disposal sites might not yield useful results, given that the citizen does not see a connection between his own state of being and such a disposal site. That is, if the fact of location of a disposal site is not relevant to him, his measured attitude about it is not likely to be very predictive of any subsequent behavior toward such a site. On the other hand, the Sherif and Sherif approach is suggestive of how to go about constructing a behavioral model that will help to specify what should be measured, and ways in which these things should be measured, to predict such reactions.

Why Behavior Is Not Easily Predicted From Attitudes

From analysis of the various theoretical approaches to understanding attitudes, it is possible to identify a number of factors that partly explain why behavior is not easily predicted from attitudes. These have important implications for the development of a behavioral model to predict citizen reactions to hazardous waste disposal sites, and for the development of an effective implementation strategy.

More recent theories have recognized that much more is involved in behavior than just one's feeling toward an object. The anticipated consequences of that behavior are also important—probably considerably more so than the feeling. One approach to the inclusion of anticipated consequences in the overall prediction is to ask what one's behavioral intentions are toward that object. As an example of asking for feeling alone, one might ask a citizen to express his attitudes about hazardous waste disposal sites. Research findings suggest that the reply, whether favorable or unfavorable, might not be useful for predicting the same citizen's response to the behavioral intentions question, "Would you protest if you learned that it was planned to locate a hazardous waste disposal facility near your hometown?"

Further, and of potentially great significance for the present project, the answer to that behavioral intentions question might be different from the answer to another behavioral intentions question, "If you did not have a job, and a good job at a good salary were available in a hazardous waste disposal facility, would you take it?"

To add to the complexity, not only is it possible to measure behavioral intentions separately from attitudes, it is also possible sometimes to set up situations in which

actual behavior can be determined separately from measurement of behavioral intentions. Results of such studies suggest that actual behavior may differ from stated behavioral intentions, depending upon the context in which the behavior occurs.

As Sherif and Sherif (1967) emphasize, there are important social controls that determine actual behavior. These controls include the groups to which one belongs, what those group members believe about the attitude object or behavior in question, the importance of those groups and beliefs to the individual in question, and so on. An adequate behavioral model must include these context variables. This point has also been emphasized, but within a different frame of reference, by Dulany (1968).

In addition to social controls, provided by existing groups and existing significant persons, there are "other variables" that influence actual behavior, which in a sense lie outside the individual. In a study of several such variables, Wicker (1971) assessed the influence of extraneous events (e.g., would you go to church if you had weekend guests who do not regularly attend church?), and evaluation of behavior (what level of church attendance is viewed as most approved). When actual church behavior was measured, a combination of these types of variables was found to predict church attendance more strongly than measures of attitude.

While one might argue that the second of his "other variables" is in itself an attitude, Wicker's study strongly suggests that the first type of "other variable" should be an important influence on *actual citizen behavior* toward hazardous waste disposal sites. By implication, the behavioral model therefore has to include the significant "other variables."

There, of course, are other considerations as well. For example, Fishbein (1967) suggests that one reason for a lack of relationship between attitudes and behavior is that the actual relevant attitude may not have been measured by the questionnaire instrument. This kind of mistake is easy to make.

Further, Fishbein suggests additional reasons why behavioral intentions may not correlate with attitudes. One of these is that behavior contrary to the expressed attitude may be positively reinforced. As an example, an individual who has expressed negative attitudes toward hazardous waste disposal sites might have an opportunity to be employed in such a facility. If he needs the job, he might accept employment and like it, even in the face of previously expressed negative attitudes.

This has extremely important implications, not only for measurement and the construction of a behavioral model, but also for recommending an intervention strategy. There is excellent evidence (Bem, 1967) that attitudes may actually more often be a *result* of reinforced behavior rather than its *cause*. While it would not be wise to conclude that all attitudes are formed in this way, Bem presents excellent evidence that at least some are, and this is supported by a variety of other researchers (e.g., Ross, Insko, and Ross, 1971; Cialdini, 1971). That is, when a person behaves in a way contrary to his attitudes, and the behavior has favorable outcomes, there is a very good chance that his attitudes will change to conform to his behavior.

This has implications for hazardous waste disposal site location. For example, an individual accepting a position in a hazardous waste disposal facility might quickly develop positive attitudes toward such sites and their location near his home. Community attitudes might be influenced by the same factors, provided information about the

proposed location was not introduced too rapidly. Economic factors of this type will necessarily be considered both in the recommended implementation strategy and in predicting the reaction potential of a particular county to a national disposal site.

As a means of predicting a county's reaction potential, a behavioral model was developed. The model allowed specification not only of the particular attitudes that must be measured, but also of additional relevant variables. The requirement for these additional relevant variables was based upon the accumulation of evidence, as previously cited, over recent years indicating a relatively low relationship between reported attitude and subsequent behavior toward the attitude object (McGuire, 1969; Fishbein, 1967; Wicker, 1969).

Accurate identification of the other variables was considered to be a critical activity, as other studies that have attempted to develop predictive models (e.g., TRACOR, Inc., 1971) were relatively unsuccessful in predicting actual complainants. One reason for this result may be the relatively small number of citizens who are sufficiently concerned or annoyed to actively express their feelings. This explanation seems substantiated by the reports of Williams and Bunyard (1966) and of Medalia and Finkner (1965). The latter study found that only 2% of their sample were sufficiently concerned to have registered a complaint about air pollution.

In summary, the available literature strongly suggests that simple prediction of behavior from attitude measurements is not very accurate. Among the reasons for the low predictiveness of attitudes for behavior are the following:

- Most attitudes are learned in a social context. They are subject to modification by the same factors that produced them in the first place, and to control by those same forces.
- In addition to attitudes, one must consider behavioral intentions, which depend upon constraints that may be operating in the situation, and behavior itself, which generally is decided on the basis of a profit-loss judgment process (Blau, 1964; Jacobs, 1970). To the extent that behavior contrary to attitudes is positively reinforced, and the positive reinforcement is significant to the individual, it is increasingly likely that behavior contrary to expressed attitudes will occur.
- Behavior controls attitudes. When behavior contrary to expressed attitudes does occur, and is reinforced, it is quite likely that attitudes themselves will be modified so as to conform more closely to the behavior itself.

Among the suggested ways in which accuracy of behavioral predictions might be improved are the following:

- Increase the level of specificity of the attitude to be measured.
- Identify relevant variables in addition to the attitude in question.
- Broaden the scope of investigation to include situational factors impinging upon the individual.

FORMAT OF THE REPORT

Chapter II of this report describes the approach taken in developing the behavioral model and the influence of this model on the questionnaire used in the national survey. It also describes the experimental design of the project and the techniques used to analyze the data.

Chapter III presents the results of the data analyses. Among the more salient results are those indicative of the receptivity of each county to the idea of a national disposal site being located there, and the variables that are most predictive of those levels of receptivity.

Chapter IV contains a discussion of the observed results.

In Chapter V, a strategy for introducing national disposal sites is presented. The described approach is general in nature, and would be applicable to any selected location. Decision rules and recommended procedures for use in modifying the general approach to a particular location are also presented.

Chapter II

APPROACH

BEHAVIORAL MODEL: PURPOSE AND DEVELOPMENT

In order to accomplish one of the purposes of this study, a behavioral model was developed and designed to perform two functions. The first function was to provide a conceptualization of how behavior toward a national disposal site (NDS) is either caused by or associated with a number of variables, as a behavioral model does not necessarily imply causality. A number of variables considered predictive of the empirical event were selected. Criteria for selection were (a) a demonstration in the literature of a relationship between the variable and a behavioral event, or (b) a logically derived supposition that a specific variable would be related to the behavioral event in question. These possible predictor variables were chosen on the basis of their anticipated effectiveness in determining how citizens within a county would react to an NDS located there. This behavior-reaction to an NDS constituted the criterion variable, against which the included independent variables would be assessed for predictive efficiency. The three levels of predictor variables and the criterion variable are shown in Figure 1.

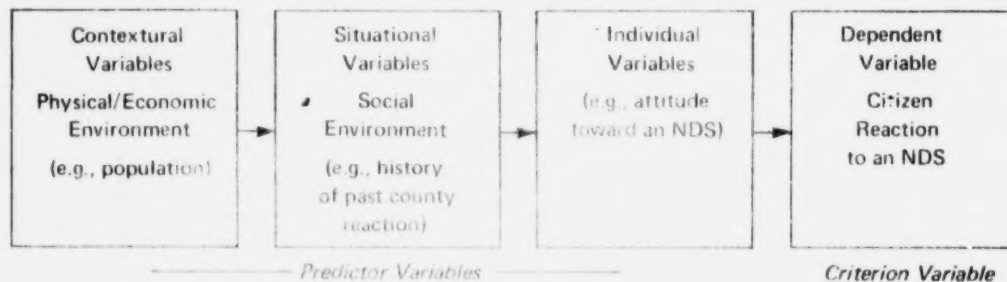


Figure 1. Behavioral Model

The second function of the behavioral model, to enable specification of decision rules for determination of a county's receptivity toward an NDS, uses the factors selected as predictive of the criterion variable. The decision rules state the procedure to be followed in operation of the behavioral model.

Each of the three classes, or levels, of selected predictor variables subsumes a number of factors. Brief descriptions of each class of predictor variable, and the included factors, are presented below.

Predictor Variables

Contextual Variables. These factors reflect the physical/economic environment of the location. The level of analysis is the area of residence—in this case, the county.

Information on these factors is generally available through public records, such as U.S. Bureau of Census publications, and they provide the respondents with a particular frame of reference (contexture) for evaluating the NDS concept. The factors included at this level are as follows:

- Population.
- Population change (the percentage of increase or decrease between 1960 and 1970).
- Median income.
- Median educational level.
- Unemployment rate.
- Impact of an NDS on the local economy (ratio of projected NDS input to the local economy to the total payroll of the county).
- Main income source (industrial/manufacturing endeavors versus non-industrial/non-manufacturing endeavors, measured by the ratio of industrial/manufacturing payroll to non-industrial/non-manufacturing payroll).
- Industrial exposure (ratio of number of industrial/manufacturing workers to non-industrial/non-manufacturing workers).
- Growth-rate index (ratio of the number of building permits issued within the last year to those issued within the last five years).
- Awareness of proximal plants (percentage of county respondents indicating a large plant was nearby).

Situational Variables. This class of predictor variable subsumes factors specific to a level of analysis closer to the individual variable class. Within this context, the social environment is used to refer to supra-individual aspects, such as the formal position of a group concerning the issue of national disposal sites. Factors included in this predictor class represent the end product of interactions of collections of individuals, and include the following:

- The position of local ecology groups concerning national disposal sites.
- The position of communication media concerning national disposal sites.
- The positions of college or university student/faculty groups concerning national disposal sites.
- Attitudes of local key influentials toward the national disposal site concept.
- Community reaction history.

Individual Variables. This predictor class is focused upon the individual citizen. Factors subsumed by this class are those that represent characteristics, attitudes, perceptions, and beliefs of the individual, such as:

- Age.
- Education.
- Sex.
- Individual attitudes/beliefs, to include (a) rated seriousness of pollution as a county problem, (b) attitude toward the NDS concept in general, (c) attitude toward a proximal (within county) NDS in particular, (d) beliefs concerning the potential impact of an NDS on natural resources consumption and the local economy, and (e) attitude toward industry in general.
- Individual perceptions, to include (a) acceptable proximity of an NDS to the nearest community, (b) acceptable proximity to the nearest community of traffic transporting wastes to an NDS, (c) dangers associated with an NDS, and (d) NDS impact on property values.
- Willingness to be employed at an NDS.
- Type of information desired concerning an NDS to be located in the county.
- Level of concern with environmental and ecological issues.
- Ratings of general activity level and social interaction.
- Acceptable behaviors that might be engaged in to support the respondent's position concerning an NDS located in the county.

Criterion Variable

The behavioral model was developed for the purpose of predicting the potential for positive or negative reaction of a specific group of people residing in a particular location with respect to establishment of an NDS in the location.

EXPERIMENTAL DESIGN

The behavioral model dictated the construction of the questionnaire for administration in the national survey. The following sections describe, in turn, the questionnaire and the types of items included in it, the method used to select survey locations, the types of respondents interviewed, and the procedure used in administering the questionnaire.

Development of the Survey Instruments

The questionnaire was the end product of several developmental stages. The behavioral model was used as a guide in constructing a preliminary survey instrument to measure the social and individual variables specified by the model.

The preliminary survey instrument was administered to respondents in two selected locations, Denver, Colorado and Newport, Indiana. These locations were selected because both have had hazardous-product generation sites located nearby: the Rocky Mountain Arsenal and the Newport Army Ammunition Depot. Available information suggested that the Newport facility was generally viewed in a moderately positive way by citizens in the area, while the citizens of Denver have, in general, reacted negatively to the presence of the arsenal. It was assumed that the factors associated with acceptance of hazardous-products generation sites would be similar in kind to those affecting reaction to other potentially hazardous operations, namely, national disposal sites.

The results of the preliminary administration were used in modifying the initial questionnaire. One of the more important changes was the phrase used in describing an NDS. During the preliminary survey, NDSs were called regional disposal sites. It was found that the word *disposal* had negative connotations for the respondents (i.e., garbage dump, trash). As a result, the decision was made to describe NDSs as "regional processing facilities" in the survey questionnaire. To make the language in this report consistent with reports of other projects, the term "national disposal site" has been retained for reporting purposes, except in Chapter V, Strategies and Contingencies. However, it is believed that any information campaign focused on NDSs will be more effective if the "regional processing facility" term is used.

A copy of the questionnaire used in the national survey is shown in Appendix A. The rationale for inclusion of each question is presented as Appendix B.

Questionnaire Items. As previously described, the behavioral model guided the selection of items comprising the questionnaire. Most of the variables included in the questionnaire were represented by a single item. An example of such a variable is level of concern with environmental and ecological issues; the respondent expressed his level of concern by selecting one of five numbers. However, several of the variables of interest were based on combinations of questionnaire items. These variables are referred to as "generated variables" and are described below.

- *Semantic Differential Scales:* Based on the work of Osgood, Suci, and Tannenbaum (1957), these scales were used in assessing respondents' attitudes toward several concepts. The attitude score was computed by summing over a set of rating scales, each set of bipolar adjectives separated by a seven-point scale. The respondent selected the position along the scale that best described, for him, the concept being rated. The derived score reflects the evaluation (or attitude) of the concept. For the scales included in the questionnaire, the potential range of scores was from four to 28, with the higher number reflecting the more positive attitude.
- *Social Judgment Scale:* Using the technique discussed by Sherif and Hovland (1965), this scale represents an additional attitudinal measure. This approach required the respondent to rate seven statements representing various degrees of positive or negative attitude toward establishing an NDS in the county. These statements were rated on four different bases. After indicating which positions were acceptable to him, the respondent selected the most acceptable position. He then selected all positions that were unacceptable, after which he indicated the most unacceptable position. The data thus obtained allow development of several latitudes of feeling. Latitudes of acceptance, rejection, and

noncommitment are used to determine the individual's attitude toward a particular concept, and also to determine his degree of involvement concerning the concept.

- *Summative Attitude Measure:* Following the approach advocated by Fishbein (1965), several rating scales were included, which, when appropriately combined, yield an attitudinal measure. For Fishbein, an attitude toward an object is a joint function of the affect (or feeling associated with certain characteristics or properties) and the individual's beliefs about how strongly these characteristics or properties are related to the attitude object. The respondents interviewed in the national survey evaluated, on four semantic differential scales, each of two characteristics or properties of an NDS. The respondents were then queried as to the strength of their beliefs that these characteristics were associated with an NDS. The two beliefs rated were that an NDS would (a) help save natural resources and (b) result in a strong local economy. Each question was also rated on four seven-point scales. These two questions constituted a measure of the individual's beliefs concerning the potential benefits to be derived from an NDS.

The following formula was used to combine the individual's summed semantic differential scale scores for each belief and evaluative (affect) measure.

$$A_o = \sum_{i=1}^2 B_i a_i$$

Where A_o = An individual's attitude toward an NDS.

B_i = The individual's belief about the characteristics or properties of an NDS.

a_i = The evaluative (affective) aspects of the individual's beliefs, that is, his evaluation of the characteristics or properties associated with the beliefs.

The above formula indicates, as previously stated, that the individual's attitude (A_o) with respect to an NDS is a function (summarization) of his beliefs (B_i) about each characteristic or property of an NDS combined multiplicatively with his evaluation of the associated characteristic or property. As used in this project, each of two beliefs on two characteristics was rated on four seven-point scales. Because of the multiplicative method of combining the four scores, the potential range of A_o was from 32 to 1,568. The higher the score, the more positive the attitude toward the object.

- *Action Potential Index:* Using the approach taken by Rosen and Komorita (1971), six behaviors were selected for rating by respondents. Every respondent rated each behavior on the following two scales: (a) a behavior intentions scale to indicate his willingness to engage in that behavior to support his position toward an NDS, and (b) an effectiveness scale to show how effective he judged that behavior would be. The respondent was not required to indicate his actual position.

The following formula was then used to compute an Action Potential Index (API):

$$API = \sum_{i=1}^6 X_i Y_i$$

Where X_i = Rated willingness to engage in each of the six behaviors to support one's position regarding an NDS on the behavioral intentions scale.

Y_i = Perceived effectiveness rating of each behavior in accomplishing the desired objective.

As the formula indicates, the ratings of the six behaviors on the intentions scale were combined multiplicatively with the corresponding ratings of the same behaviors on the effectiveness scale. These products were summed to yield API.

The intentions scale and the effectiveness scale have, respectively, a range of from 7 (extremely willing) to 1 (extremely unwilling) and from 4 (extremely effective) to 1 (not effective). Thus, across all six behavioral items, the API has a score range of from 6 to 168. The higher the score, the more the individual was willing to engage in all activities, and the more effective he felt them to be in supporting his stand.

- *General Activity Level.* Influenced by the work of Smith (1969), a scale was developed to ascertain general activity level. Respondents were asked to estimate the time they spent per week engaging in the following activities: reading newspapers, reading magazines or books, and talking with people outside the family and off the job. Estimates of the time (rounded to the nearest one-fourth hour) spent engaging in each of these activities were summed across activities. The distribution of these summed scores was subsequently subdivided into quintiles. Each quintile, from the lowest to the highest, was assigned a number from 1 through 5, respectively. Thus, the potential score range of the general activity level was from 1 through 5, with larger numbers representing greater general activity levels and social interaction.

Selection of Locations

The questionnaire was administered to respondents in 10 selected counties. The counties were selected by using the following criteria: (a) They were on a list, generated during a simultaneous EPA contract study, of counties considered technically feasible for location of a national disposal site; (b) they were representative of the entire list; (c) they were geographically distributed; and (d) trained interviewers were readily available to conduct the interviews.

The 10 counties selected were: Sumter County Alabama; Polk County, Texas; Harris County, Texas; Franklin County, Massachusetts; Wayne County, Michigan; Montgomery County, Pennsylvania; Kern County, California; Ogle County, Illinois; Benton County, Washington; and Sussex County, New Jersey. The relative locations of the counties are shown in Figure 2. The counties to be surveyed were selected on the basis of representativeness of locations where NDSs might be located rather than national representativeness.



Figure 2. Candidate Counties for National Disposal Sites
Sampled in the National Survey

Respondents

Two types of respondents were interviewed in each of the 10 counties. The two types, and the planned number of each, were (a) approximately 180 individuals representing a random sample for the county, and (b) approximately 10 purposefully selected individuals.

The latter category consisted of (a) the editor of one county newspaper, if any, (b) individuals identified as being influential in county decisions, (c) the head of any local ecology group, and (d) the head of any student ecology group of a college or university located within or near the county, if any. It was thought that these respondents would more accurately reflect the factors in the Situational or Social Variable class of the behavioral model. That is, the reactions of these types of individuals ("influentials") to the idea of a possible disposal site in their county might significantly influence the reaction of the general population to such an event.

Questionnaire Administration

Chilton Research Services (CRS), HumRRO's subcontractor, was responsible for administering the questionnaire in the national sample. Chilton has research staffs in 322 counties across the United States. In each of these counties, there is one field supervisor and a number of interviewers who are thoroughly trained in field survey operations. Most

of the interviewers are women who have had previous experience in occupations involving a great deal of personal contact with others.

The 10 counties surveyed were near at least one of Chilton's field offices. Coordination of the survey in all field offices was the responsibility of Chilton's Field Manager. To ensure thorough understanding of the survey questionnaire used, each interviewer was provided with a questionnaire and an instruction manual previously prepared by the CRS Field Manager. After studying the questionnaire and manual, interviewers were given an in-depth training session by the Field Manager via WATS (Wide Area Telephone Service) lines. This session included a detailed discussion of the sampling plan, a question-by-question review, and an explanation of the questionnaire.

Field supervisors then reviewed the questionnaire and procedures with the interviewers prior to the start of the field work. The first day's work of each interviewer was submitted to the Field Manager for review. Interviewers were critiqued on technique and accuracy, if necessary, and were then sent back into the field.

In order to obtain an unbiased probability sample in each survey location, the following procedure was used. Random starting points (households) within each county were selected by members of Chilton's sampling staff, using all telephone directories that covered the county. Households that appeared in more than one directory were included only in the directory in which they first appeared. In this way, 18 segments of 10 households each were selected in every county. Beginning at the starting points (given households), interviewers completed their segments by prelisting every household and then conducting an interview at every other household, moving in a clockwise direction around the block until 10 interviews were completed.

In a selected household, eligible respondents included adults 18 years of age or older. Priority was given to the male head of household, with one callback made in an attempt to complete an interview. If the male head could not be reached, the following order was used to select a respondent: (a) male 18 years old or older, (b) female head of household, and (c) female 18 years old or older.

Approximately 10 interviews in each of the counties surveyed were planned for influential or key people purposefully selected for their positions of influence. As previously mentioned, this group included (a) heads of ecology groups, if any, (b) the editor in chief of newspapers, (c) heads of student ecology groups, if any, and (d) individuals who were considered by those who resided in the county as having a significant impact on the decisions made within the county or community. The latter group of respondents was identified through the names elicited by Question 16 of the questionnaire ("Of the people in this community, is there someone whose opinion you would respect on environmental or ecological issues?"). Heads of community ecology groups and student ecology groups, if any, and newspaper editors were identified through the efforts of the field supervisor. The interviewer left these respondents for the last part of her assignment, called for an appointment at their convenience, and then completed the interview in person.

To ensure the validity of the data collected, completed interviews were edited in the field by the local supervisor. A validation was made on 10% of the interviews by the supervisor, that is, she telephoned 10% of the respondents to ensure that the responses recorded were accurate and that the entire interview had been conducted in person.

Additionally, after all questionnaires were returned to Chilton Research Services' headquarters, a further 25% validation was made for each interviewer's work.

All completed questionnaires were edited by the CRS coding staff. Codes for open-ended questions were established by HumRRO, with minor revisions made by the CRS coding staff. After editing and coding, all questionnaires were key punched and a clean computer data tape was prepared by CRS for analysis.

ANALYSES

Descriptions and Comparisons. The questionnaire items for which responses were scored are presented in Appendix C. The tables show the percentage (and the frequency represented) of respondents, by county, selecting each position or response alternative. In addition, descriptive statistics (means and standard deviations) were computed for each continuous variable. These statistics are presented with each variable.

Descriptive statistics for the "generated variables" (based on combinations of questionnaire items) are presented in Appendix D. Descriptions of the statistical techniques used in the data analysis are presented below.

*Analysis of Variance and *t* Tests.* Analyses variance are used when the researcher wishes to determine whether the difference between the means of two or more groups is significant—that is, due to treatment or group membership effects rather than random error. Where comparisons among counties were made, either on single item variables or on "generated variables," the resulting *F*-ratio is presented together with the relevant variable in Appendices C and D, respectively.

If, through the use of analysis of variance, one finds there is a significant treatment or group membership, it is sometimes useful to isolate the specific differences between pairs of groups or treatments within the larger set. This can be accomplished through the use of a *t* test for differences between two means. The *t* test allows such comparisons to be made in a simple and straightforward manner.

In both the analysis of variance and the *t* test, the technique generates two (or perhaps more in the case of analysis of variance) estimates of population variance. One is based on group means within the sample, and the other (usually) on variation between persons. The former is a basis for estimating the magnitude of group differences, while the latter estimates pure chance differences. Both techniques compare these two estimates; the resulting ratio is then compared with tabled values (Winer, 1962), which vary as a function of the number of cases in the sample. If the computed value exceeds the tabled value, the difference between group means is then taken to be greater than would be reasonable to expect on a pure chance basis. The inference then is that group differences can be attributed to "real" (i.e., non-chance) variables.

Correlational Analysis. Correlational analysis is used to determine the strength and direction of association between any two given continuous variables. It is also used as an initial step to more complicated multivariate analyses, such as multiple regression and model building, in that it allows for the initial specification of a set of independent variables that are likely to be related to the dependent variable of interest.

Crosstabulations. Bivariate crosstabulations perform the same function for nominal or categorical variables as is performed by correlational analysis for continuous variables. That is, it allows the researcher to determine the degree of "covariation" between two nominal variables.

A crosstabulation is basically a joint frequency distribution of cases according to two or more classificatory variables (Nie, Bent, and Hull, 1970). It is possible to analyze these joint frequency distributions by certain tests of significance, for example, the chi square statistic (χ^2) and the contingency coefficient (C). Use of this technique will allow for determination of whether two or more counties differ on a certain variable, such as the frequency of respondents who select particular alternatives to a question.

Automatic Interaction Detection. Automatic Interaction Detection (AID) analysis is uniquely suited to deal with data analysis problems characteristic of many social science research situations, in which the purpose of the analysis involves more than the reporting of descriptive statistics, but may not necessarily involve the exact testing of specific hypotheses. This may happen when the specific relationships between a set of predictor variables and a dependent variable have not been thoroughly researched and are unknown at the outset of the analysis (Sonquist and Morgan, 1970).

AID has the ability to deal with the following types of problems that usually cannot be handled effectively by other multivariate statistical techniques:

- (1) Interactions—the degree of relationship of one predictor variable (x_1) to the criterion (y) is dependent upon the level of another predictor variable (x_2).
- (2) Nonlinear effects—the relationship between x_1 and y is dependent upon the particular level of x_1 itself.
- (3) Causal priorities— x_1 is caused by x_2 , and x_1 is, in turn, related to y (Armstrong and Andress, 1970).

These types of data problems are encountered in almost all social science research situations.

The objective of the AID program is to reduce the errors in predicting a dependent variable using a particular set of independent variables. The program first divides the entire sample into two groups according to one of the potential predictor variables included in the analysis. The output of the program allows a model to be constructed that has a "tree-like" structure. Each "leaf" of the tree represents a unique subgroup of respondents as defined by the variables used in previous splits and their mean score on the criterion variable.

Behavioral Model Predictions. Behaviors in which respondents had engaged to express their feelings concerning a plant located near them could be identified by means of a survey such as the present one. These behaviors had occurred in the past, and, if one of the purposes of this project had been to develop a behavioral model to predict reactions to nearby plants, they could have served as a criterion variable. In developing such a model, an attempt would have been made to identify variables that would accurately predict the level and type of reaction. The availability of a specific criterion variable is necessary for validation of such a model.

Unfortunately, no such criterion variable was available to validate predictions resulting from the behavioral model developed as part of this project. The ideal criterion variable would have been actual citizen reaction to an actual NDS. However, the fact that an NDS does not, at present, exist precludes such a criterion variable.

Since the ultimate criterion of actual citizen reaction to an NDS was not available, the decision was made to develop an intermediate criterion variable (ICV). Data were available from selected questionnaire items to construct three variables, which, when appropriately combined, would represent an adequate and logically justifiable ICV. The variables selected were the (a) summated attitude measure (SAM), (b) action potential index (API), and (c) general activity level (GAL). Since each of these measures had been related to behavioral intentions and/or behavior in several studies (e.g., Smith, 1969), it was assumed that the combined measure would be related to the ultimate criterion variable, citizen reaction to an NDS. It was further assumed that variables in the behavioral model predictive of the ICV would also be predictive of the ultimate criterion variable.

It should be noted that neither the API nor the GAL measures indicate whether the respondent would react positively or negatively toward the NDS. By including a summated attitude measure (SAM), an inferential interpretation of the ICV score could be made, with higher ICV scores indicating greater likelihood of favorable response toward an NDS.

The theoretical range of scores for each of the three component measures of the ICV varied greatly. In order to avoid a weighting effect for one of the variables, weights were assigned each of the component measures to ensure that their theoretical ranges were equalized.

The resulting ICV score was based on a summation of the weighted scores for each of the three composite measures.

Development of the ICV resulted in revision of the behavioral model. The revised model is shown in Figure 3.

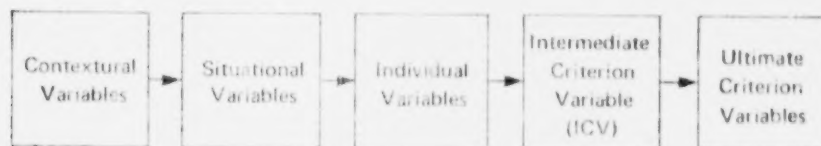


Figure 3. Revised Behavioral Model

Chapter III

RESULTS

This chapter will deal, in turn, with each of the following:

- Characteristics of the respondents and of the 10 counties surveyed.
- Results obtained from use of several types of attitudinal measures. There are three measures of attitudes toward the NDS concept, and two concerning the location of an NDS in the county of residence. A further measure allows for comparison between evaluations of an NDS and a chemical plant.
- Respondents' perceptions of the characteristics of an NDS (e.g., safety), and their beliefs concerning an NDS.
- Respondents' feelings of the acceptable proximity of an NDS and the traffic conveying wastes to the NDS to the nearest community.
- Types of information that respondents felt would be necessary before making a decision concerning the location of an NDS in their county, including preferred scores for environmental and ecological information.
- Types of behaviors in which respondents felt that they would most likely engage to support their positions concerning an NDS.
- Concerns of respondents that are relevant to establishment of an NDS in a particular county.
- The operation of the behavioral model, and predictions resulting from its operation.

DESCRIPTIONS OF RESPONDENTS

This section describes the characteristics of respondents, from both the random and selected (influential) samples, and of the counties surveyed.

Table 1 gives a county-by-county breakdown of each type of respondent interviewed. There were 1,797 Type 1 respondents (random sample) for all locations, and 103 in sample Types 2-5 (selected sample). Table 2 presents demographic characteristics for both types of samples. The modal age of the Type 1 respondents was the 20- to 30-year range (22.9%). Respondents in the selected sample were somewhat older, with a modal age in the 40- to 50-year range.

A majority of the random sample were high school graduates and 41.2% reported at least some college. As expected, a larger proportion, 58.3%, of the selected sample consisted of

Table 1
Frequency and Percentage of Each Type of Respondent Interviewed, by County

County	Respondent Type ^a											
	1		2		3		4		5		Total	
	%	N	%	N	%	N	%	N	%	N	%	N
Sumter, Ala.	95.2	180	--	--	--	--	--	--	4.8	9	100	189
Polk, Texas	93.2	179	.5	1	--	--	--	--	6.3	12	100	192
Harris, Texas	94.3	180	2.1	4	.5	1	.5	1	2.6	5	100	191
Franklin, Mass.	93.3	181	.5	1	.5	1	--	--	5.7	11	100	194
Wayne, Mich.	93.2	178	2.6	5	.5	1	--	--	3.7	7	100	191
Montgomery, Pa.	98.5	180	.5	1	.5	1	--	--	.5	1	100	183
Kern, Calif.	96.7	179	1.1	2	--	--	--	--	2.2	4	100	185
Ogle, Illinois	93.8	180	2.1	4	.5	1	--	--	3.6	7	100	192
Benton, Wash.	94.2	180	--	--	--	--	--	--	5.8	11	100	191
Sussex, N.J.	93.8	180	.5	1	--	--	--	--	5.7	11	100	192
Total Frequency		1,797		19		5		1		78		1,900

^aRespondent Type:

- 1 - Random sample (heads of households, or alternates)
- 2 - Heads of local ecology groups
- 3 - Editor of one county newspaper
- 4 - Presidents of student ecology groups
- 5 - Individuals identified as being influential in county decisions

Table 2
Demographic Characteristics of Random and Selected Samples

Characteristic	Type 1 (Random)		Types 2-5 (Selected)	
	Percent	Frequency	Percent	Frequency
Sex				
Male	52.7	947	88.3	91
Female	47.3	850	11.7	12
Educational Level				
Elementary School	8.4	151	1.9	2
Some High School	15.1	271	5.8	6
Graduate High School	35.3	633	13.6	14
Some College	24.4	437	20.4	21
College Graduate	16.8	301	58.3	60
Age				
Under 20	3.9	70	0.0	0
In Your 20s	22.9	411	6.8	7
In Your 30s	19.0	341	18.5	19
In Your 40s	19.1	343	39.8	41
In Your 50s	15.2	272	22.3	23
In Your 60s	13.0	234	10.7	11
70 or Over	6.9	123	1.9	2

college graduates. The random sample from Harris County, Texas contained the largest percentage of college graduates (28.9%), while the random sample from Ogle County, Illinois had the largest percentage with only an elementary school education (15.6%).

Only two counties (Sumter County, Alabama and Ogle County, Illinois) were characterized by a marked discrepancy between the percentages of male and female respondents in the random sample (Sumter: males = 72.8%; Ogle: males = 67.8%). A comparison of the types of respondents showed that males were represented more in Types 2 5 (selected) than in the random sample (88.3% vs. 52.7%, respectively).

Table 3 presents the variables selected for comparisons among the counties and for inclusion in the contextual class of predictor variables in the behavioral model. Since these purposes were primarily accomplished through use of a computer analysis in developing the behavioral model, any results of such comparisons as were made will be reported in the section describing the operation of the behavioral model.

The county-by-county results for each item on the questionnaire are presented in Appendix C.

ATTITUDINAL MEASURES

Several measures were included to assess respondents' attitudes toward the NDS concept in general. Results for these measures are described in turn.

Favorability Toward NDS Concept

The first measure required the respondent to indicate his position on a five-point scale of favorability toward the NDS concept. Table 4 describes the points on the scale and shows the percentage of each type of sample (random and selected) choosing each position. As shown in Table 4, a majority in each type of sample was in favor of an NDS. It is interesting to note that even though an approximately equal percentage of the random and the selected sample were either "in favor" or "strongly in favor" of an NDS, a greater percentage of the selected sample endorsed the "strongly in favor" position. Attitude toward an NDS was not significantly different among counties when tested by analysis of variance. The NDS concept was evaluated in approximately the same manner, favorably, in all counties surveyed.

There were 75 respondents in the random sample of 1,797 who indicated that they were either "very much against" or "not in favor" of an NDS. The following reasons for their feelings were elicited from 31 of these: 18 (54.8%) felt that an NDS would cause pollution; nine (29.0%) felt that it might not be inspected properly; and four (12.9%) stated that they were just against the idea.

Summative Attitudinal Measure

Another attitudinal measure included in the questionnaire was based upon the work of Fishbein (1965). This measure was fully described in the Experimental Design section (Chapter II) of this report. Although it was used as a component of the ICV, the results of its use are presented separately here.

Table 3
Demographic Characteristics of Counties

Variable	County									
	Sumter	Polk	Harris	Fklin	Wayne	Mntg	Kern	Ogle	Benton	Susse x
Population	16,974	14,457	1,741,912	59,210	2,666,743	623,799	329,162	42,867	67,800	77,528
Population Change	-.153	+.043	+.401	+.079	.00	+.207	+.127	+.125	+.079	+.574
Median Income	3,938	5,639	10,348	9,874	11,350	12,749	8,937	10,166	9,733	10,785
Median Education	8.70	9.03	12.10	12.25	11.50	12.20	12.10	12.15	12.50	12.20
NDS Economic Impact ^a	.273	.170	.0004	.022	.0002	.001	.005	.030	.016	.025
Unemployment Rate	.048	.029	.031	.086	.080	.019	.077	.022	.103	.032
Industrial Experience ^b	.638	.541	.280	.527	.696	.663	.164	1.450	.316	.278
Primary Income Source ^c	.803	.793	.381	.632	1.044	.906	.199	2.458	.457	.337
Growth Rate	+3.278	+.353	+.721	-.232	+.067	-.233	+.142	-.028	-.159	-.338

^aRatio of projected NDS input to the local economy to the total payroll of the county.

^bRatio of number of industrial/manufacturing workers to non-industrial/non-manufacturing workers.

^cIndustrial/manufacturing endeavors versus non-industrial/non-manufacturing endeavors, measured by the ratio of industrial/manufacturing payroll to non-industrial/non-manufacturing payroll

Table 4
Favorability Toward an NDS

Position	Random Sample ^a		Selected Sample	
	Percent	Frequency	Percent	Frequency
Very Much Against	1.0	18	2.9	3
Not in Favor	3.2	57	4.9	5
Unsure	23.5	422	20.4	21
In Favor	46.1	828	36.9	38
Strongly in Favor	21.8	392	32.0	33
Don't Know	4.4	79	2.9	3
Total	100.0	1,796	100.0	103

^aTotal of frequencies is different from total sample size because of missing data.

These results were in accord with those just described. Respondents were, in general, favorably inclined toward the proposed NDS system. The maximum score for this measure was 1,568, and the neutral point (assuming a respondent selected the neutral scale point of 4 for all scales comprising this measure) was 512. The obtained mean score for the random sample was 858.9, which reflects a moderately positive attitude toward the NDS concept. Results for the selected sample were in the same direction as those of the random sample. A mean score of 957.2 was obtained by respondents in the selected sample. This value reflects a more positive attitude toward the NDS concept among the selected respondents.

Mean scores for this measure ranged from a high of 1009.8 in Polk County, Texas to a low of 752.3 in Benton County, Washington. Even though there were significant differences among the counties as indicated by an analysis of variance ($p < .001$), the data for all counties reflected a relatively favorable attitude toward the NDS concept.

Semantic Differential Technique

As described in the Experimental Design section, this attitude score is obtained by summing an individual's response to each of four scales, consisting of two bipolar adjectives separated by a seven-point scale. The maximum possible score is 28, and the minimum is 4, with the higher score indicating a more positive attitude. An example of such a scale:

Good _____ : _____ : _____ : _____ : _____ : _____ : _____ Bad

The mean attitude score for the NDS concept was approximately 20.5 for the random sample and 21.0 for the selected sample. These values reflected a fairly strong favorable attitude toward the NDS concept. Because the difference between the attitudes expressed by the two samples was small, the samples were combined and an analysis of variance was used to determine whether differences existed among the counties. This analysis showed that differences among the counties were significant ($p < .001$).

Respondents in Polk County, Texas were found to have the most favorable attitude toward an NDS (Mean = 22.08). The Montgomery County, Pennsylvania respondents were

least favorable (Mean = 19.37). However, the mean attitude score for even this county falls above the neutral point on the scale, reflecting a somewhat positive attitude.

Attitudes Toward a Proximal NDS

For the results of attitude surveys to have predictive validity, the attitude object must be perceived as relevant and salient by respondents. Accordingly, after their attitudes toward the NDS concept were elicited, respondents were asked how they would feel about having an NDS located in their county. Two measures of their feelings were included in the questionnaire. The results for each are described below.

Favorability Toward a Proximal NDS. The first of these measures required the respondent to indicate his position on a five-point scale of favorability toward an NDS being located in his county. Table 5 describes the points on the scale and shows the percentage of each type of sample (random and selected) choosing each position. The results indicate that the majority of respondents in each sample were in favor of an NDS being located in the county of residence.

Table 5

Favorability Toward an NDS in County

Position	Random Sample ^a		Selected Sample	
	Percent	Frequency	Percent	Frequency
Very Much Against	2.5	44	4.8	5
Not in Favor	5.5	98	11.6	12
Unsure	28.2	505	24.3	25
In Favor	45.0	806	35.0	36
Strongly in Favor	15.0	270	23.3	24
Don't Know	3.8	68	1.0	1
Total	100.0	1,791	100.0	103

^aTotal of frequencies is different from total sample size because of missing data.

The 142 respondents in the random sample who indicated that they were "very much against" or "not in favor" of an NDS in their county were asked to specify a reason for that position. Only 67 respondents gave a reason. The most frequently cited reasons, and the number of respondents advancing each are as follows: 31 (46.3%) were concerned that it would cause pollution; 10 (14.9%) were opposed because it might be built near homes; 5 (7.5%) were fearful of the hazards that might be involved.

An analysis of variance showed that there was a significant overall difference among the counties in terms of their feelings about an NDS being built there ($p < .001$). The highest percentages of respondents, over 20%, indicating that they were "strongly in favor," were in Polk and Harris Counties, Texas. The lowest percentages indicating that they were "strongly in favor" were in Ogle County, Illinois (10.0%) and in Montgomery County, Pennsylvania (10.5%).

Social Judgment Scale. The second measure of the respondents' attitude toward an NDS being located in the county of residence was based on the social judgment scale technique discussed by Sherif and Hovland (1965). This technique was fully discussed in the Experimental Design section of Chapter II. Briefly, seven positions, varying along a positive-negative dimension concerning the perceived necessity of an NDS for his county, were set up, and the respondent selected various positions as acceptable, unacceptable, or neither.

In analyzing the results, the convention of plotting latitudes of acceptance, rejection, and noncommitment for each type of sample as a function of the most acceptable position to the respondent was not followed because an unmanageably large set of data (84 graphs) would have been generated. Instead, the decision was made to plot the percentages within each sample, selecting each of the seven positions as most acceptable or least acceptable. This was done for the entire random sample and the selected sample. Additionally, a county-by-county breakout was done for the random sample only. This approach produced only 12 graphs and provided all information necessary for the purposes of this study. The most and least acceptable positions for the total random and selected samples and for the random sample by county are shown in Appendix E.

In general, there were few differences between the two samples. Over 40% of the random sample, and over 32% of the selected sample chose the position that "While it is not easy to decide, our county probably will benefit if an NDS is located here" as the most acceptable position. When respondents selecting this position were combined with those endorsing the position that "Considering our county, it is hard to decide whether or not it is wise to locate an NDS here," over 72% of the random sample and 65% of the selected sample were represented. A substantial majority of respondents in each sample were thus either neutral or favorable toward the necessity of locating an NDS in their county.

Opposition to the idea can be estimated from the percentage of respondents choosing as most acceptable the position that "Locating an NDS here will be extremely bad for our county." Only 2.1% of the random and of the selected samples chose this position. Conversely, 64.1% of the selected and 58.9% of the random samples selected this position as least acceptable.

Few differences were observed among the counties. More respondents in Harris County, Texas (17.6%) endorsed the position that "Locating an NDS here is absolutely essential to our county" than in any other county. The Wayne County, Michigan sample had the next largest group of respondents (15.5%) endorsing the same position as most acceptable. Such high ratings from these two highly industrialized locations can be interpreted as reflecting a real concern for the environmental impact of their industrial complexes. Differences between counties were not significant. Most respondents in all counties are at least moderately favorable toward the location of an NDS in their county.

Attitude-Related Measures and Comparisons

Semantic Differential Technique. As reported previously, respondents' attitudes toward the NDS concept were assessed, in part, by means of evaluative scales based upon semantic differential techniques. At the same time, attitudes toward a chemical plant were measured for comparative purposes. Table 6 shows the mean and standard deviation for each of the two samples toward the two concepts. The higher the mean, the more favorable the attitude.

Table 6

Attitudes Toward an NDS and a Chemical Plant, by Sample Type^a

Attitude-Object (Concept)	Sample	N	Mean	Standard Deviation	t	p
Chemical Plant NDS	Random	1792	14.9	6.4	28.43	<.001
	Random	1786	20.5	5.4		
Chemical Plant NDS	Selected	101	16.0	6.2	6.01	<.001
	Selected	99	21.0	5.4		

^aNs are different from total size for each type of sample because of missing data.

Respondents in both samples were significantly more positive in attitude toward an NDS than toward a chemical plant. These results suggest that an NDS should not be introduced to the public as "something like a chemical plant."

One of the bipolar evaluative scales used in development of the previous attitudinal measure was labeled safe-dangerous.¹ An NDS and a chemical plant were also compared on this scale to determine perceptions concerning the potential hazard of an NDS. The maximum score of 7 corresponded to a judgment that the concept was safe, while a score of 1 corresponded to dangerous.

For the random sample, the mean score was 3.67 for the chemical plant and 4.95 for the NDS, reflecting a perception that the NDS is safer than a chemical plant. In percentage terms, only 3.4% of the random sample rated an NDS as dangerous, while 17.3% rated the chemical plant as dangerous. At the other scale extreme, 20.7% of the sample rated the NDS as safe, while only 7.4% did so for the chemical plant. This result seems to bolster the earlier statement, that an NDS should not be presented as a chemical plant.

Respondents in Wayne County, Michigan and Sursex County, New Jersey rated the NDS as more dangerous than did those in any of the other counties, while more of the respondents in Polk County, Texas rated the NDS as being safe.

Indirect Measure of Attitude Toward an NDS. An additional method of identifying potential reservations concerning an NDS involved asking each respondent whether employment at such a location would be acceptable (the respondent was assured that the pay would be comparable to that received through other employment). Of the random sample, 89.3% stated that they would accept such a job if they were looking for work, while only 2.6% indicated that they would not. The largest percentage of respondents (93.9%) stating that they would accept such work was in the Polk County, Texas sample. There were 46 random respondents who reported that they would not accept such a job and supplied a reason for their unwillingness to do so. Only eight of the 46 (17.4%) indicated that they feared the potential hazards associated with such employment. This finding is in agreement with the previously presented ratings given an NDS on a safe-dangerous scale.

In line with results for the random sample, 93.2% of the selected sample indicated they would accept such employment provided they were seeking a job.

¹The instrument as a whole is contained in Appendix A.

BELIEFS, PERCEPTIONS, AND INFORMATION

Among the beliefs and perceptions of respondents concerning an NDS that were explored during the survey were beliefs concerning the benefits of an NDS, beliefs concerning the impact of an NDS on nearby property values, and perceptions of acceptable proximity to the nearest community of both an NDS and traffic carrying wastes to the NDS. Other relevant perceptions concerned ratings of pollution as a county problem and expressed concern with environmental and ecological issues. Additionally, respondents identified the types of information they considered desirable in reaching a decision of whether an NDS should be located in their county. The most acceptable source of such information concerning environmental and ecological issues was also ascertained.

Beliefs

Benefits. A variable considered critical in evaluating reaction potential to an NDS was respondents' beliefs concerning the benefits that might be derived from operation of such a facility in the county. The semantic differential technique was again used to assess beliefs that an NDS would (a) help save natural resources and (b) result in a strong local economy. The maximum score, 28, indicated a strong belief that an NDS would accomplish each of the described purposes. Table 7 presents the results for each sample.

Table 7
Beliefs Concerning an NDS^a

Belief	Sample	N	Mean	Standard Deviation
Will help save natural resources	Random	1,784	21.3	5.5
Will result in strong local economy	Random	1,781	19.2	5.5
Will help save natural resources	Selected	100	21.8	5.8
Will result in strong local economy	Selected	100	18.4	5.8

^aNs are different from total size for each type of sample because of missing data.

The differences between the two samples on belief scores are not significant. Both samples hold a fairly strong belief that an NDS will help save natural resources. Although the selected respondents are slightly less believing than the random sample, both believe that an NDS will help create a strong local economy.

However, differences among counties for both beliefs were determined to be statistically significant through the analysis-of-variance technique. For the first belief, that an NDS would help save natural resources, the *F*-ratio was significant ($p < .001$). Respondents in Polk County, Texas had a higher mean belief score (23.17) than did respondents in any other county. The lowest mean belief score (19.62) was obtained in Benton County, Washington.

The *F*-ratio for the second belief, that an NDS will result in a strong local economy, again indicated significant differences among the 10 counties ($p < .001$). As before, the Polk County, Texas respondents were more believing (21.77) than respondents in the other counties. The lowest mean belief score (17.79) was obtained in Montgomery County, Pennsylvania.

Probable Impact on Property Values. A point of concern for developing an information campaign was the beliefs respondents held concerning the local impact of an NDS. It was felt that one belief that might be most salient for most respondents would be its impact upon property values. Accordingly, respondents were asked how they believed property values would be affected by location of an NDS in the county. Table 8 presents the results for the two samples; the county-by-county results are shown in Appendix C for the random sample only.

Table 8
Beliefs Concerning Impact of an NDS on
Local Property Values, by Sample

Belief	Random ^a		Selected	
	Percent	Frequency	Percent	Frequency
Property Values Will:				
Increase	25.0	448	13.6	14
Stay the Same	33.0	592	60.2	62
Decrease	15.4	276	8.7	9
Don't Know	26.6	479	17.5	18
Total	100.0	1,795	100.0	103

^aTotal of frequencies is different from total sample size because of missing data.

As indicated in Table 8, there are major differences between the two samples. The selected sample believed that the impact upon local property values would be much less marked than did respondents in the random sample.

When an analysis of variance was used to examine differences between counties, a significant *F*-ratio was obtained ($p < .001$), indicating that there were very significant differences among counties. The largest percentage of respondents (46.9%) who believed that property values would increase was in Polk County, Texas. More respondents in Montgomery County, Pennsylvania (30%) believed that property values would decrease than in any other county.

Considering the entire sample, the majority of respondents believed that an NDS would have either no effect or a positive impact on local property values.

Perceptions

Acceptable Proximity of an NDS. Each respondent was also asked to indicate, on a seven-point scale, how close to the nearest community he was willing to have an NDS located. The four distances were within one, five, 10, and 25 miles. The results for the entire random sample are presented in Table 9.

Table 9
Acceptable Proximity of an NDS, Random Sample Only^a

Scale Position	Within 1 Mile		Within 5 Miles		Within 10 Miles		Within 25 Miles	
	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency
1 Extremely Unwilling	24.9	455	12.0	215	9.1	162	7.9	141
2	5.1	82	3.1	56	1.8	32	2.2	40
3	5.0	90	5.3	95	2.6	47	2.1	37
4 Unsure	27.9	500	21.4	382	18.8	336	17.4	311
5	13.5	241	17.4	313	13.7	246	8.7	158
6	9.8	175	14.3	255	15.4	276	12.2	218
7 Extremely Willing	13.5	241	26.2	468	38.3	686	49.2	880
Don't Know	.3	5	.3	5	.3	5	.3	5
Total	100.0	1,789	100.0	1,789	100.0	1,790	100.0	1,790

^aTotal of frequencies is different from total sample size because of missing data.

Willingness of the respondent increased as a function of the distance to the proposed NDS. Over 50% of the sample perceived an NDS location within five miles to be acceptable, based upon the percentage of respondents selecting Positions 5, 6, or 7. When the data were examined on a county-by-county basis, the sample in Polk County, Texas contained the most respondents "Extremely Willing" (36, or 20.1%) to have the NDS located within one mile. Conversely, Sussex County, New Jersey had the most respondents who were "Extremely Unwilling" (73, or 40.6%) to have an NDS located within one mile of a community.

The individual's ratings of his willingness to have an NDS located within one, five, 10, or 25 miles of a community were summed to yield an overall acceptable proximity index. The maximum score for this index was 28, with a higher score reflecting a greater overall willingness to have an NDS located near a community. The acceptable proximity index varied significantly across counties ($p < .05$). The counties representing the extremes on this index were the same two just discussed—Polk County, Texas had the highest index score, and Sussex County, New Jersey had the lowest.

Acceptable Proximity of Waste-Carrying Traffic to the NDS. Respondents were also requested to indicate their perceptions of the closest permissible distance to a community for a route for waste-carrying traffic. A scale similar to that for the NDS was used, the distance conditions being stated as through the community, within one mile, or within five miles. Table 10 presents the results for the entire random sample.

As with the acceptable proximity of the NDS, the farther away the waste-carrying traffic, the more willing the respondents were to have such traffic routes. The two counties previously mentioned once more represented the extremes of the distribution. Polk County, Texas had the highest percentage of respondents (31.8%) who were "Extremely Willing" to have waste-carrying traffic move through the community. The largest percentage of respondents (55%) indicating they were "Extremely Unwilling" to have such traffic move through the community was in Sussex County, New Jersey.

Table 10
Acceptable Proximity of Waste-Carrying Traffic,
Random Sample Only^a

Scale Position	Through the Community		Within One Mile		Within Five Miles	
	Percent	Frequency	Percent	Frequency	Percent	Frequency
1 Extremely Unwilling	27.2	486	19.4	347	9.9	175
2	5.1	91	5.7	102	2.5	45
3	4.9	87	4.9	88	4.4	79
4 Unsure	23.8	425	21.6	386	17.6	315
5	13.5	241	15.1	269	15.9	285
6	8.7	156	12.4	221	17.0	303
7 Extremely Willing	16.4	294	20.5	366	32.3	577
Don't Know	.4	8	.4	8	.4	8
Total	100.0	1788	100.0	1787	100.0	1787

^aTotal of frequencies is different from total sample size because of missing data.

The procedure previously described was followed in computing an overall acceptable waste-carrying traffic proximity index. Examination of the county-by-county data following a significant analysis of variance ($p < .0001$) resulted in identification of the two counties representing the extremes of the distribution, Polk County, Texas and Sussex County, New Jersey. These two counties were the most and least willing, respectively, to have such waste-carrying traffic in the vicinity of a community.

Best Transportation Method of Wastes. One question requested the respondent to specify which method of transporting waste to the NDS, by truck or by train, was preferable. The majority of respondents (Table 11) perceived the more acceptable form of transportation for the waste to be by rail.

Table 11
Preferred Method of
Transporting Wastes,
Random Sample Only^a

Response Alternative	Percent	Frequency
By Train	61.6	1103
By Truck	31.7	567
Either	4.2	75
Neither	.7	14
Don't Know	1.8	32
Total	100.0	1791

^aTotal of frequencies is different from total sample size because of missing data.

Results have not been presented for the selected sample throughout this section because there were few differences between the random and selected samples on the perceptual measures described to this point.

Pollution as a Problem. Respondents were also asked their perceptions of the extent to which pollution represented a county problem. This was considered likely to be related to their attitudes toward an NDS being located nearby. The perceived level of seriousness of the pollution problem is shown in Table 12. The majority of respondents in each sample perceived that pollution was at least a fairly serious problem. Although the selected respondents tended to perceive it as less serious, this difference was not significant. The largest percentage of subjects indicating that pollution was not a problem was in Sussex County, New Jersey (22.3%), while the smallest percentage selecting this alternative was in Harris County, Texas (.6%). In terms of those who rated pollution as a very serious problem, Harris County recorded the highest percentage (57.2%) and Sumter County, Alabama the lowest (2.8%).

Table 12

**Rated Seriousness of Pollution as a Problem
In Respondent's County, By Sample**

Position	Random Sample ^a		Selected Sample	
	Percent	Frequency	Percent	Frequency
Very Serious	14.8	263	16.5	17
Serious	22.4	398	13.6	14
Fairly Serious	28.5	506	35.9	37
Not Serious	19.0	337	24.3	25
Not a Problem	10.6	188	8.7	9
Don't Know	4.7	82	1.0	1
Total	100.0	1774	100.0	103

^aTotal of frequencies is different from total sample size because of missing data.

Environmental and Ecological Issues as a Cause of Concern. In addition to reported seriousness of pollution as a county problem, respondents were also asked to indicate how concerned they were about environmental issues and ecology. This variable was judged to be potentially important in determining how respondents would evaluate the possibility of having an NDS located in the county. The extent to which each level of concern was endorsed in each sample is shown in Table 13. Most respondents were either concerned or very concerned about environmental issues. However, a much larger percentage of the selected sample, relative to the random sample, reported being very concerned about environmental issues. The difference between samples is significant ($t = 5.88$, $p < .001$).

Respondents in Harris County, Texas recorded the highest percentage (45.0%) of very concerned responses; the lowest percentage (21.1%) was in Benton County, Washington.

Table 13

**Rated Level of Concern With Environmental and
Ecological Issues, By Sample**

Level of Concern	Random Sample		Selected Sample	
	Percent	Frequency	Percent	Frequency
Not Concerned	2.2	40	1.0	1
Not Very Concerned	7.1	128	1.9	2
Fairly Concerned	21.6	389	8.7	9
Concerned	37.1	666	27.2	28
Very Concerned	29.9	537	61.2	63
Don't Know	2.1	37	0.0	0
Total	100.0	1797	100.0	103

Information

Desired Types. Respondents were asked what further kinds of information they would like to have if they had to make the decision of whether or not an NDS would be built near them. Although given an opportunity to specify at least two kinds of desired information, not all respondents did so. The responses were coded by means of the categories listed in Table 14, which shows the information preferences specified first and second, respectively, by respondents in each sample.

There is one major difference between the types of information specified by respondents in the two samples. Those in the random sample are more interested in obtaining technical information about the operation of the NDS and with environmental impact. Conversely, those in the selected sample, while also interested in the procedures to be used, are more concerned with information pertaining to ownership, the regulatory aspects of the NDS, and proximity to nearby towns than are the randomly selected respondents. These differences have marked implications for the design of a public information campaign.

Influential Sources. Respondents in both samples were asked to specify which of several information sources had the greatest influence on their attitudes concerning environmental and ecological issues. Answers to this question are presented in Table 15. All respondents rate the mass communication media as having the greatest influence on their attitudes concerning environmental and ecological issues. The selected respondents attribute more influence to state and national environmental groups than do random respondents. On the other hand, random respondents attribute more influence to their friends than do selected respondents.

BEHAVIORAL INTENTIONS

A measure which had been selected as one component of the ICV was the Action Potential Index (API), described earlier. Briefly, respondents were asked to rate each of six behaviors on two scales: (a) their willingness to engage in that behavior to support their position concerning an NDS, and (b) the perceived effectiveness of each behavior in

Table 14
Type of Additional Information Specified Concerning NDS, By Sample

Desired Type of Information	Specified First				Specified Second			
	Random ^a		Selected		Random ^a		Selected	
	%	f	%	f	%	f	%	f
Type of Input	10.7	75	13.6	14	9.3	43	9.5	8
Procedures Used	52.4	366	12.6	13	40.1	186	23.8	20
Energy Requirements (Type and Volume)	.7	5	1.0	1	.6	3	1.2	1
Potential Danger	11.4	80	2.9	3	14.7	68	6.0	5
Transportation of Wastes to NDS	2.9	20	1.0	1	6.7	31	4.8	4
Aesthetic Aspects of NDS	8.3	58	3.9	4	12.9	60	2.4	2
Impact on Local Environ- ment and Ecology	13.6	95	10.7	11	15.7	73	8.3	7
Proximity to Towns	0.0	0	15.5	16	0.0	0	13.1	11
Impact on Local Economy	0.0	0	1.9	2	0.0	0	6.0	5
Land Requirements and Appropriate Usage	0.0	0	1.9	2	0.0	0	1.2	1
Type of Ownership and Financing	0.0	0	22.3	23	0.0	0	11.8	10
Extent of Government Involvement in Regula- ting and Monitoring	0.0	0	4.9	5	0.0	0	8.3	7
Type of Industrial Participation, Regula- tory vs Voluntary	0.0	0	2.9	3	0.0	0	0.0	0
Other	0.0	0	3.9	4	0.0	0	3.5	3
Don't Know	0.0	0	1.0	1	0.0	0	0.0	0
Total	100.0	699	100.0	103	100.0	464	100.0	84

^aTotal of frequencies is different from total sample size because of missing data.

supporting their position. Because of the significant correlation coefficient between the two scales ($r = .58, p < .001$), and to focus on the types of behaviors respondents are willing to perform, only the results for the willingness scale are presented in Table 16. To facilitate presentation of the results, Positions 1 through 3 (all representing various levels of unwillingness to perform a behavior) were combined. Similarly, Positions 5 through 7 (representing various levels of willingness to perform a behavior) were combined. Position 4 (uncertainty about whether to perform a behavior) was retained.

The behaviors in which random sample respondents are most likely to engage to support their position concerning an NDS are attending a public meeting where the issue will be debated, and signing a petition to be published in a newspaper. While these behaviors are also very likely to be performed by selected respondents, those in the selected sample are also likely to help prepare a speech or participate in a rally. These latter two behaviors are not likely to be performed by the random respondent.

Table 15

**Information Source Regarded as Most Influential On Respondent's
Environmental and Ecological Attitudes, By Sample**

Information Source	Random Sample ^a		Selected Sample	
	Percent	Frequency	Percent	Frequency
Your Friends	18.4	325	8.1	8
Community Groups	7.1	127	7.1	7
Newspapers, TV, Magazines	56.4	998	48.5	48
State and National Environmental Groups	18.1	320	36.3	36
Total	100.0	1770	100.0	99

^aTotal of frequencies is different from total size for each type of sample because of missing data.

Table 16

**Expressed Willingness of Respondents to Engage in Various Activities to
Support Their Position Concerning an NDS, By Sample^a**

Level of Willingness		Attend Public Meeting Where the Issue is Debated	Help Prepare Speech	Participate in Rally	Sign Newspaper Petition	Circulate a Petition	Distribute Literature Door to Door
Unwilling (1-3)							
Random	%	17.3	52.4	47.9	19.4	52.8	55.6
	f	310	937	850	349	947	996
Selected	%	10.7	21.3	36.1	36.9	56.3	62.1
	f	11	22	39	38	58	64
Unsure (4)							
Random	%	13.2	16.8	19.4	14.3	15.5	14.2
	f	237	301	344	256	277	254
Selected	%	6.8	7.8	12.8	5.8	9.7	7.8
	f	7	8	13	6	10	8
Willing (5-7)							
Random	%	69.4	30.7	32.5	66.2	31.6	30.0
	f	1243	548	576	1184	566	537
Selected	%	82.5	70.9	49.1	57.3	34.0	30.1
	f	85	73	51	59	35	31
Don't Know							
Random	%	0.1	0.1	0.2	0.1	0.1	0.2
	f	2	2	3	2	2	3
Selected	%	0.0	0.0	0.0	0.0	0.0	0.0
	f	0	0	0	0	0	0

^aFor the random sample, the N ranged from 1773 to 1792; for the selected sample, the N was 103. Frequency difference from total sample size is due to missing data.

Focusing on the "Unsure" category, the selected respondents are generally much more certain about their willingness to perform the action in question. The exception is with respect to participating in a rally, where nearly as much uncertainty is expressed by the selected as by the random respondents. This result, and others contained in Table 16, lead to a fairly clear conclusion. While selected respondents are generally more willing to perform behaviors supportive of their positions, they are less willing to commit themselves either to actions requiring a high level of public visibility or to those that might be interpreted as inappropriate. However, their generally greater willingness to support their positions on an NDS may reflect a greater degree of involvement in many local issues. Or, it could simply reflect habitual modes of action to which they are already accustomed. In either case, there are implications for the implementation strategy.

There were significant differences among the counties with respect to expressed willingness to engage in each of the six behaviors. The largest percentage of respondents reporting an extreme willingness to engage in each of the six behaviors was in Polk County, Texas. In conjunction with the results of other measures on which Polk County respondents scored higher than those in other counties, the citizens of Polk County seem extremely anxious to have an NDS located there.

The behaviors most likely to be performed in supporting one's position concerning an NDS should be considered in reviewing predictions derived from operation of the behavioral model. Additionally, identification of such behaviors has implications for development of the most effective public information program for a selected location.

SURVEY OF COUNTIES

The development and underlying assumptions of the intermediate criterion variable (ICV) were presented in detail in the Behavioral Model Predictions section. On the assumption that the ICV is related to the ultimate criterion variable, the surveyed counties were ranked on the basis of the county mean ICV score. The county with the largest mean score should be the county most receptive to the establishment of an NDS. This interpretation was based on the components selected for inclusion in the ICV, and depends on the following rationale.

People are more receptive to an NDS when:

- The summative attitudinal measure (SAM) component of the ICV is large, reflecting a more positive attitude toward an NDS.
- The Action Potential Index (API) component of the ICV is large, indicating a high level of willingness to engage in various activities supportive of their position concerning an NDS.
- The general activity level (GAL) component of the ICV is high, reflecting many informal social contacts and, inferentially, indicative of respondents being well informed concerning important local issues.

The counties, the mean ICV score of each, and the receptivity rank assigned each are shown in Table 17. (A rank of 1 identifies the greatest receptivity to establishment of an NDS.)

Table 17

**Counties Surveyed, Mean ICV Score, and
Rank on Receptivity to Establishment of an NDS**

County	Mean ICV Score (X 100)	Receptivity Rank
Polk, Texas	27.56	1
Sussex, N.J.	26.75	2
Harris, Texas	25.50	3
Wayne, Mich.	25.43	4
Sumter, Ala.	24.63	5
Kern, Calif.	24.23	6
Montgomery, Penn.	24.18	7
Franklin, Mass.	24.03	8
Ogle, Ill.	22.79	9
Benton, Wash.	22.30	10

BEHAVIORAL MODEL

In order to identify variables within the behavioral model predictive of the ICV, the Automatic Interaction Detection (AID) analysis was used. As discussed in the Analyses section of Chapter II, the objective of the AID program is to reduce the error in predicting an individual's potential reaction to an NDS as defined by the ICV.

The output of the AID program was used to construct a "tree-like" structure. Each terminal "leaf" of the tree represents a unique subgroup of respondents as defined by the variables used in the previous splits and their score on the ICV. This tree structure is presented in Figure 4. Application of the AID analysis technique led to the identification of 11 variables to operate the behavioral model.

Overall, the model developed through use of the AID analysis presents a picture of a complicated set of interactions or contingencies among the predictor variables and the ICV. For example, note the two groups formed from the first split: those who were *very* concerned about the environment (Group 3) and those who were less than very concerned (Group 2). The most acceptable social judgment scale position score subdivided the latter group (into Groups 4 and 5) but was not involved in any of the subsequent splits for the former group. Thus, the most acceptable social judgment scale score appears to be useful in further defining respondents who are less than very concerned about environmental and ecological issues, but of no value in further defining respondents who are very concerned about environmental issues. Many other such examples are readily apparent in the model.

The coefficient of determination (R^2) for the set of predictor variables comprising the model is .21. This coefficient indicates the portion of the overall variance in the ICV that can be accounted for with knowledge of an individual's relative position or score on the 11 variables identified. These 11 variables, along with β^2 , a statistic that reflects the relative contribution of each variable to the total variance accounted for, are listed in Table 18.

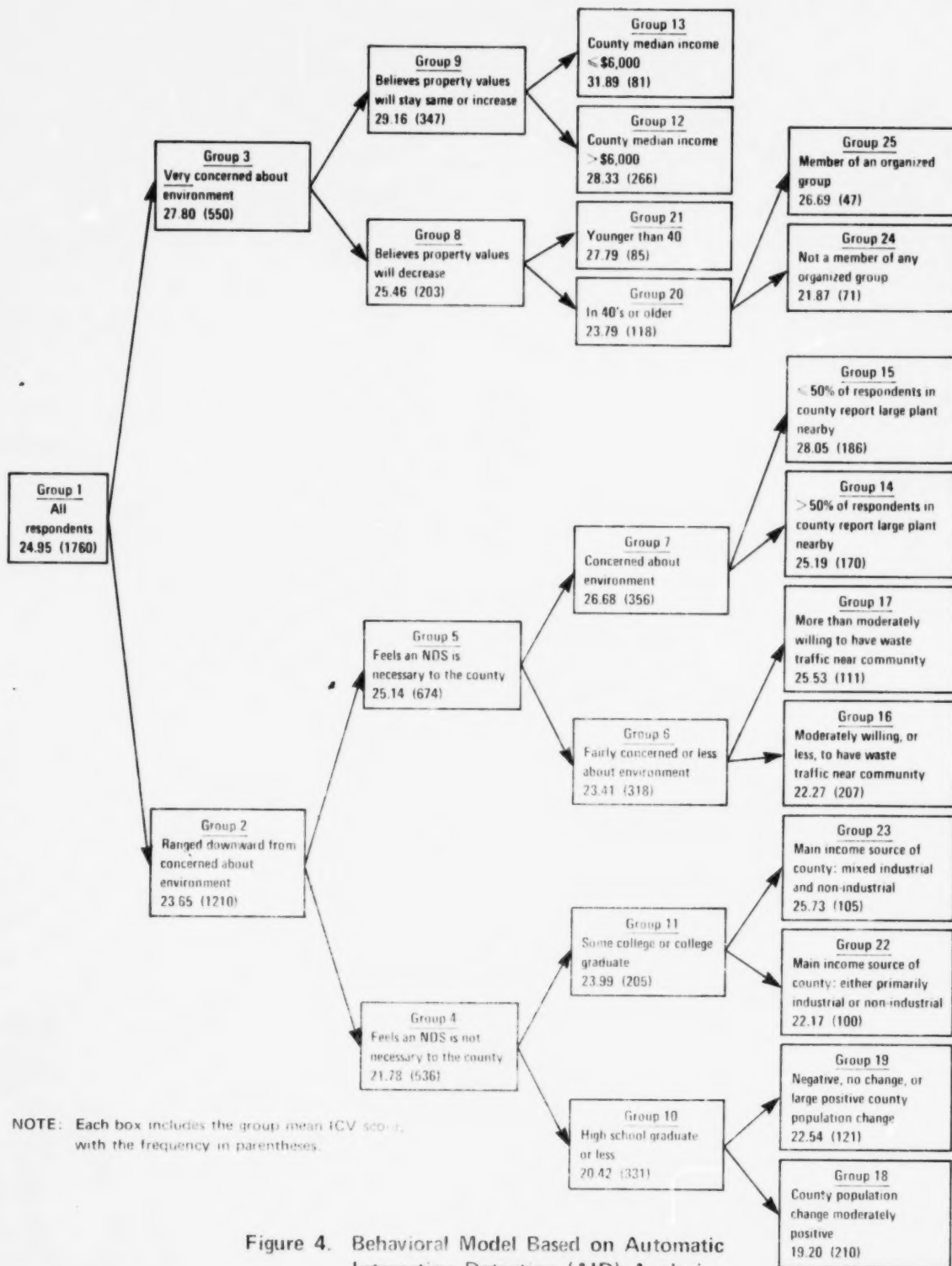


Figure 4. Behavioral Model Based on Automatic Interaction Detection (AID) Analysis

Table 18
Relative Importance of 11 Variables in an
Automatic Interaction Detection (AID) Analysis^a

Characteristic/Variable	Relative Importance: Portion β^2
Environmental Concern	.0854
Perceived Necessity for an NDS in the County	.0349
Perceived NDS Impact on Property Values	.0185
Educational Level	.0169
Population Change	.0088
Median Income	.0082
Age	.0082
Feelings Concerning Waste-Carrying Traffic	.0079
Reported Incidence of Large Plants Located Nearby	.0077
Principal County Income Source	.0068
Membership in Organized Group(s)	.0068

^aN = 1,760 for the combined samples. Frequency difference
from total size of samples because of missing data.

The four most critical variables of those listed are:

- The individual's reported concern regarding environmental and ecological issues.
- His rating, as reflected in the most acceptable position score on the social judgment scale, of the essentiality of an NDS to the county.
- His perception of the impact of an NDS on property values.
- His reported level of education.

These four variables resulted in the greatest reduction in errors of prediction in relation to the other seven variables used in the splitting process.

REACTION PREDICTIONS: DESCRIPTIONS OF TERMINAL GROUPS

The characteristics of the 13 terminal subgroups that were formed on the basis of the discriminative power of the 11 variables entered into the analysis are presented in Table 19. The ordering of the group descriptions in the Table is from those most likely to react favorably to an NDS (high ICV means) through a midrange (ICV subgroup scores are approximately equal to the mean ICV score of all subjects) to those least likely to react favorably to an NDS (low subgroup ICV scores). Individuals possessing characteristics very similar or synonymous with those of Group 13, the first group listed, would be

most likely to react favorably to an NDS. These individuals would be very concerned about the environment, perceive that an NDS would have no effect or a positive one on property values, and live in a county where the median income is below \$6,000. On the other hand, individuals possessing characteristics like those of Group 18, the last group listed in Table 19, would be least likely to react favorably. These individuals believe that an NDS is not necessary to the county, have a high school education or less, and reside within a county that has experienced a moderately positive population change between 1960 and 1970.

Table 19
ICV Final Groups in Rank Order, by Means

Characteristics of ICV Groups	ICV Mean (X 100)	Number of Cases	Group Number
Resides in a county with a median income less than \$6,000, believes that an NDS will have no effect or a positive one on property values, and is <u>very</u> concerned about the environment.	31.89	81	13
Resides in a county with a median income greater than \$6,000, believes that an NDS will have no effect or a positive one on property values, and is <u>very</u> concerned about the environment.	28.33	266	12
Resides in a county where existing industrial plants have relatively low salience, is concerned about the environment, and feels an NDS is necessary to the county.	28.05	186	15
Is between 18 and 39 years old, either does not know the impact of an NDS on property values or believes that it will have a negative impact on property values, and is <u>very</u> concerned about the environment.	27.79	85	21
Belongs to organized group, is 40 years old or older, does not know what impact an NDS will have on property values or believes property values will decrease, and is <u>very</u> concerned about the environment.	26.69	47	25
Resides in a county where the income source is mixed industrial and non-industrial, has had some college or is a college graduate, does not feel an NDS is necessary to the county, and is either not concerned at all with the environment or is only moderately concerned.	25.73	105	23
Is extremely willing to have NDS wastes moved through or near the community, is either not concerned or only fairly concerned about the environment, and feels an NDS is necessary to the county.	25.53	111	17
Resides in a county where existing industrial plants have relatively high salience, is concerned about the environment, and feels an NDS is necessary to the county.	25.19	170	14
Resides in a county where the population change within the last 10 years has been other than moderately increasing, has a high school education or less, feels an NDS is not necessary to the county, and is either not concerned or is just concerned about the environment.	22.54	121	19

(Continued)

Table 19 (Continued)
ICV Final Groups in Rank Order, by Means

Characteristics of ICV Groups	ICV Mean (X 100)	Number of Cases	Group Number
Is extremely unwilling to somewhat willing to have NDS wastes moved through or near the community, is not concerned to moderately concerned about the environment, and feels an NDS is necessary to the county.	22.27	207	16
Resides in a county where either a substantial percentage or only a small percentage of the county income is derived from industry, has had some college or is a college graduate, does not feel an NDS is necessary to the county, and is either not concerned or only moderately concerned about the environment.	22.17	100	22
Does not belong to any organized group, is 40 years old or older, either does not know or believes an NDS will have a negative impact on property values, and is very concerned about the environment.	21.87	71	24
Resides in a county where there has been a moderately positive change in population over the past 10 years, has a high school education or less, does not feel an NDS is necessary to the county, and is either not concerned or only moderately concerned about the environment.	19.20	210	18

It should be noted that the differences between *adjacent* groups, although sometimes significant, are small, indicating that fine discriminations are difficult to make between such groups although each group is uniquely defined or different from all the others. This is partly a function of the procedure that the AID program uses to split the groups. That is, terminal groups may be uniquely defined, but not differ significantly in terms of their ICV mean score from adjacent groups. The "causal" chain may differ, but not the overall reaction potential.

Even though there are few large and/or significant differences between adjacent groups in the model, there are large and significant differences between more extreme groups. For example, the difference between the ICV means of the groups most and least likely to react favorably, 31.89 and 19.20, respectively, is large and very significant ($t = 15.67$, $p < .0001$). This suggests that the efficiency of the model may be quite sufficient for predicting the reaction potential of extreme groupings, but less so for groups having moderate or intermediate ICV scores. Confirmation of this conjecture would require a cross-validation of the model, that is, predicting ICV scores with the model for individuals in another random sample and comparing (correlating) them with the actual ICV scores of these same individuals.

EFFICIENCY OF PREDICTOR VARIABLE CLASSES

The factors subsumed under each of the three classes of predictor variables in the behavioral model—contextual, situational (social), and individual—were included as

candidate predictor variables in the AID analysis. It is readily apparent from Table 19 that the factors subsumed by the individual class of variables were the most predictive of the ICV. The individual's reported level of concern for environmental issues, the most acceptable social judgment scale score, perceived impact of an NDS on property values, and reported educational level collectively accounted for approximately 16% of the variance in the ICV. This is over two-thirds of the total variance accounted for by the model derived from the AID analysis.

Identification as a member of the selected sample versus membership in the random sample was, itself, included as a candidate predictor variable in the AID analysis. Thus, the computer program could have split the entire group—or subgroup—into two, representing random versus selected (i.e., such split would occur if it would significantly reduce errors of prediction). Such a split did not occur, indicating that the differences in responses of the two were not of consequence. Exclusion of this variable might have been an artifact of the statistical procedure, caused by the small size of the selected sample (N = 103). Therefore, it would be premature to discard as unimportant the impact of the selected respondents upon public acceptance of an NDS.

Equally, the impact of the social variable class of the behavioral model should not be ignored even though it was not found to be a significant primary predictor in the AID analysis. It may be that the causative chain is more remote for the contextual and social classes of variables operating through the individual variables. This aspect will be covered in greater detail in Chapter IV: Discussion.

Several variables subsumed by the contextual variable class were predictive of the ICV: (a) population change, the percentage increase or decrease in population between 1960 and 1970; (b) median income; (c) primary income source, the ratio of the manufacturing/industrial payroll to the non-manufacturing/non-industrial payroll of the county; (d) the salience of large plants in the area, a measure derived for each county from the percentage of respondents reporting that a large plant was located nearby. The predictive efficiency of these variables was much lower than that of the individual level variables. This contextual class of variables collectively accounted for only slightly more than 3% of the ICV variance.

Chapter IV

DISCUSSION

Discussion concerning the results of this project will be presented in three sections. The first will contain a summary description and analysis of project activities. An important part of these activities was the development of a behavioral model for predicting reaction potential toward a national disposal site in specified locations. The first section will also include a description of the model and predictions generated through its operation. The second section will consist of an interpretative discussion of the findings. The final section covers a suggested logical extension of the model and rules for use of the model in reaching decisions as to the receptiveness of a particular location to an NDS. The use of such rules in revising the receptiveness rankings of the counties surveyed in this project is discussed.

DESCRIPTION AND ANALYSIS OF PROJECT ACTIVITIES

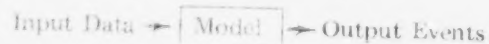
Purposes

This project had three purposes, all oriented toward ascertaining the social aspects of the concept of a system of national disposal sites (NDSs). These purposes were to (a) measure present public attitudes toward the proposed concept, (b) develop a behavioral model as a means of predicting the probable reactions of people located near a specific proposed site, and (c) recommend the most effective approach to informing the public about the proposed system.

Rationale

The rationale for the work in this project called first for the development of a behavioral model. According to this rationale, the remaining project activities would be guided by the nature of the model generated.

Conceptually, a behavioral model is a set of functional relationships between antecedent and resulting events:



In this schematic, the model is shown as that which intervenes between input and output. Behavioral models perform at least two functions. One is to provide a conceptualization of how a behavior is either caused by or associated with a number of variables. The second is to serve as the basis for formal decision rules concerning the relationships among the predictors and the behavior (criterion). While the actual content of a model may consist of equations or a set of logical derivative steps, the objective is to predict output events (e.g., behavior). The model takes whatever form is necessary, based upon empirical test and validation.

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Model Development

The development of a complete model must therefore include at least four general steps:

- Specification of the behavior to be predicted.
- Specification of the input data to be used for prediction.
- Development of a set of predictive equations or logical relationships.
- Validation of the predictive relationships using additional data.

The behavioral model developed in this project conformed to the general outline just given, and project activities followed the general sequence of steps for model building.

Criterion Variable Specification. The outcome event that the model had to predict was citizen reaction to an NDS. Interest was focused on specific behavior reactions (e.g., protest, acceptance). However, it was known at the outset that actual behaviors could not be used as the dependent variable, because no NDS was in existence, nor would one be during the life of this project.

Accordingly, plans were made for the identification, development, and eventual use of a substitute criterion (intermediate criterion variable, ICV), which will be described in a later section.

Input Data Specification. The second major step in the work was the development of the outline of the model itself as a basis for identifying input data. This consisted of a listing of probable predictors of citizen reaction, based on a study of previous research and logical analysis.

Three categories were used to classify the probable predictor variables. These three classes and the basis for subsuming factors in each were contextual (physical/economic environment of the county), situational (county social environment), and individual (personal data). The listing of probable predictors within a class, in turn, dictated the choice of items in the survey questionnaire used in this project. The items were chosen for their potential in eliciting information relevant to the predictor variable(s)—among them, measures of citizen attitudes toward an NDS.

These predictor variables dictated not only questionnaire items, but also the types of respondent samples selected. Over 94% of the respondents were selected on a random basis. The remainder of the sample was purposefully selected so as to obtain information relevant to specific predictor variables. The criterion for inclusion in this second type of sample was that the individual be perceived as one with current or potential influence on decisions concerning local issues. There were relatively few identifiable individuals within each county who could be so categorized.

The questionnaire was administered in 10 counties selected from a list of feasible locations for an NDS. The criteria used in selecting these 10 counties included the requirement for an overall nationally representative sample. The principal source of data was in the form of one-half hour interviews with each of the 1,500 respondents. The second data source was public records.

Development of Predictive Relationships

Identification of Relationships. The principal statistical treatments used for the data were crosstabulation, analysis of variance, and Automatic Interaction Detection (AID) analysis. The first two were used to ascertain the significance of differences between groups (i.e., counties), while the third was used to develop the behavioral model.

As previously outlined, one step in model development is specification of the behavior to be predicted. The basis for construction of an intermediate criterion variable (ICV) has been presented earlier in the report. Basic to use of the ICV was the assumption that it would itself be predictive of actual citizen reaction. However, use of the ICV should not be construed as an indication of its adequacy as a dependent variable. It should be kept in mind that the ICV was developed and used through necessity, lacking an actual criterion.

Therefore, the ICV was used as the independent variable in the AID analysis. The purposes of the AID analysis were to (a) identify those independent variables that reliably predicted the dependent variable, and (b) serve as a basis for developing decision rules for operating the model for predicting receptivity of future candidate sites to an NDS. These purposes are analogous to the functions previously specified for a behavioral model.

Reaction Potential Predictions. The AID analysis identified 11 variables, which, taken together, accounted for a significant portion of the variance in the dependent variable. These 11 variables, as well as the ICV, represent a conceptualization of the variables either causing or associated with a behavioral event—reaction to an NDS. While these 11 variables do predict reaction potential (the ICV), several cautions should be kept in mind. First, more variance in the dependent variable is unaccounted for than is attributable to the predictor variables. Secondly, the ICV is a constructed variable, resting on the untested assumption that it is predictive of actual behavior—reaction to an NDS. While this is a reasonable assumption, and was a necessary one, it would be prudent to crossvalidate the model to confirm its present structure if a dependent behavior variable should become available in the future (e.g., if an NDS were to be established).

INTERPRETATIVE DISCUSSION OF RESULTS

Attitudes

Several of the questionnaire items were designed to assess the respondent's attitudes toward and beliefs about an NDS, not only as an abstract idea but also toward establishment of one in the respondent's county. Of primary interest were the positive attitudes toward an NDS reported by most respondents. Not only are citizens relatively favorably disposed toward an NDS, they are generally agreeable to having one located in their county. Results for one of the attitudinal measures showed that respondents generally endorsed positions ranging from neutral to relatively positive concerning the necessity for establishing an NDS in their county. Citizens generally feel that the NDS system concept has merit and are in favor of its implementation.

Respondents in both types of samples (random and selected) were generally in agreement in (a) their attitudes toward the NDS concept and toward having one in the county, (b) their perceptions of the acceptable proximity of both an NDS and the waste-carrying

traffic routes to the nearest town, and (c) their beliefs that an NDS will not only help save natural resources, but will also result in a strong local economy.

All respondents had more favorable attitudes toward an NDS than toward a chemical plant; they also were very certain that a chemical plant is much more dangerous than an NDS.

Information

When queried as to the information source having the greatest influence on their environmental and ecological attitudes, respondents most frequently selected the mass media. Inferentially, the mass media is perceived as the most credible information source. This agrees with other findings in the psychological literature. Weiss (1971) found that television is seen as the most credible of the media, with newspapers second. However, as pointed out by Wade and Schramm (1969), the press is preferred to television for science and health news.

A deviation from this general finding concerning the preferred sources of information is related to income level. Greenberg and Dervin (1969) reported that there is an increase in mention of "other people" as the preferred source of information among low income people. In this project, more respondents in Polk County, Texas (median income = \$5,639) reported that their environmental and ecological attitudes were influenced by friends and neighbors than in any other county.

"Influentials"

Serious attention should be given the purposefully selected sample ("influentials"), in spite of lack of difference from the random sample shown in the analysis. (The influential-noninfluential variable had been included as a possible predictor, but results of the analysis did not confirm its importance.) One interpretation is, of course, that this variable actually has no relationship to the ICV. However, the lack of difference could have been due to the relatively small number of influentials sampled ($N = 103$), and the analysis procedure used.

The importance of "influentials" is indicated by many sociological and psychological researchers (e.g., Katz and Lazarsfeld, 1955) who have taken the position that such individuals may serve the function of mediators. Performance of this function involves filtering information received from mass media and then transmitting the acceptable messages to the public, presumably influencing local opinion. This may be less relevant now than it was several years ago, in part because of the advent of television. However, two hypotheses seem in order here concerning such influentials:

- Their influence increases as a function of the salience and relevance of the issue. The more local the issue, the more influence is exerted.
- Their influence increases as the median income and/or median education of the county decreases.

If these hypotheses are accepted, the implications for the introduction strategy are obvious. The work of Cram, *et al* (1969) would seem to provide some support. These researchers found that the probability of acceptance of fluoridation by a municipal

government was contingent upon acceptance or endorsement by the mayor or specific members of the political structure.

Because of the logical importance of influentials, their responses were analyzed in relation to those of members of the random sample to identify any differences that might exist. Perhaps because of their greater age, experience, and education, these selected individuals differed from random respondents in several respects. They were generally more in favor of an NDS. A larger proportion believed that the establishment of an NDS in the county would have little impact on property values than did random respondents.

Other results illustrate the numerous differences between the two samples. Respondents were requested to rate several behaviors on the basis of their willingness to engage in each to support their positions toward an NDS. Behaviors most endorsed by random respondents were attending a public meeting where the issue will be debated, and signing a petition to be published in a newspaper. In addition to these behaviors, influentials were likely to help prepare a speech and participate in a rally. Inferentially, these respondents can also be expected to be more involved in local issues; they reported greater willingness than random respondents to engage in all behaviors.

Influentials are also more concerned with environmental and ecological issues; by inference, they may also be better informed. When respondents were asked what additional information they would desire before approving of an NDS being located nearby, influentials specified information somewhat different from that desired by random respondents. Influentials are more concerned with information pertaining to ownership, regulatory aspects of an NDS, and proximity to nearby towns. In contrast to influentials, randomly selected respondents were more interested as a first item of information in technical details concerning an NDS and its operation. Only 26.2% of the influentials wanted this type of information first.

Although the influentials indicated that they would like to have information concerning an NDS's proximity to nearby towns prior to approval, they did not differ appreciably from random respondents on ratings of the acceptable proximity of an NDS. Approximately one-fourth of the respondents were extremely willing to have an NDS located within five miles of the nearest town, and almost one-half were extremely willing to have it within 25 miles. The desire for such information by influentials may reflect their greater caution prior to commitment. This, in turn, may be a function of their somewhat greater age, and having a greater variety of experiences to draw upon.

These results are very relevant to the strategy to be used for successful introduction of an NDS to a particular location. As will be stated in Chapter V, Strategies and Contingencies, the influentials in a given location should be contacted initially concerning a proposed local NDS. The findings described here show that influentials believe that the county will probably benefit, not suffer, from an NDS. Their beliefs and favorable attitudes should constitute a positive factor in obtaining county acceptance of such an installation. Acceptance or rejection, by citizens, of concepts such as an NDS is frequently predicated not on factual information presented rationally, but on emotional responses. This makes it even more critical for successful introduction of an NDS that the influentials be persuaded to endorse the proposal. The results just discussed imply that obtaining their acceptance may involve dissemination of different types of information than would be used in a general information campaign.

BEHAVIORAL MODEL

Behavioral Model: Attitudinal Predictor

The independent variables identified as predictors of the ICV included an attitudinal measure, a not unexpected result. While there is general agreement that attitudes alone do not determine behavior, an individual's attitude frequently accounts for a portion of the variance in behavioral events. The emergence of an attitude variable as one of the 11 predictors, accounting for 3% of the accounted-for variance in the ICV, conforms to previous findings but may overestimate the proportion of variance that would be accounted for in actual behavior. The ICV was not behavioral, and one component was attitudinal.

Behavioral Model: Perceived Need for a Logical Extension

Use of the introduction strategy is predicated upon identification of one or more counties potentially receptive to an NDS. The selection is based upon operation of the behavioral model described earlier. A caveat must be inserted at this point. The research staff had personal knowledge of, or had collected information concerning, several of the surveyed counties. When the counties were ranked for receptivity on the basis of mean ICV score, the rankings in some cases conflicted sharply with other indicators. There seemed little doubt that use of the ICV as the dependent variable led to the exclusion of "other" variables that probably would be critical if an NDS were actually being introduced into a local area.

The remainder of this section discusses the types of information considered important in determining county receptivity to an NDS.

In Sussex County, New Jersey, 21% of the land area is held by federal or state governmental agencies for park and recreational use, while 36% is devoted to agriculture. Vernon Valley, site of two major ski resorts, was chosen for a multi-million dollar recreation club. Plans are underway to develop a golf course and motel complex in the same area. Forty-nine firms, employing 3,000 persons, are located in the county. This is a relatively small county, with a total land area of 526 square miles.

From this information, probable reactions of county residents to an NDS can be inferred. Residents are probably mainly interested in either recreational or agricultural uses of the land. As there is no heavy industry in the county, it is likely that young people will leave the area to seek employment. The usual result of the movement of youth out of an area is to leave a relatively nonmobile group of older residents who are generally conservative in their outlook. This group is frequently reluctant to endorse any controversial project, preferring the status quo.

However, these characteristics have been partially offset in Sussex County by rapid population growth during the 1960-1970 decade. The rate of change was 57.4% (+57.4), with many of the new homeowners working outside the county (e.g., New York). It is probable that at least some of these people were attracted to the county because of its emphasis on the recreational use of the land. It is also likely that many of these newer county citizens would not have been included in the survey because of their working hours. In this case, the high ICV value associated with this county may be based mainly upon responses of the wives of such new residents and on responses of indigenous citizens. Should this be true, the ICV value is spurious in that it does not fully reflect the

potential negative reaction of the county. Support for this inference was provided by the subjective impressions of interviewers visiting the county. Their feeling was that industry is not desired, and that anything that might contribute to pollution or have ecological impact would not be welcomed in the county. For these reasons, it seemed necessary to assign a lower overall receptiveness rank to this county.

In Benton County, Washington, there are two primary industries, the AEC's Hanford Plant and agriculture. The county, and especially the town of Richland, are extremely favorable in their attitude toward the AEC plant, the largest employer in the county. An example of the extent of acceptance of this plant is reflected in the names of businesses in the area, such as Nuclear Automotive, Atomic Bowling Lanes. Considering this apparent acceptance, it was surprising that Benton County received such a low ICV value.

In a follow-up to determine possible causes, it was learned that a Seattle-based firm had attempted to establish a hazardous chemical disposal operation in Benton County about six months prior to this national survey. Their public education approach had produced a "boomerang" effect and the firm had been forced to abandon its plans. In the "boomerang" effect the opposite reaction to that desired occurs; it is generally associated with attempts to influence people's attitudes. Examples of factors that can produce a boomerang effect are (a) trying to convince people to change their positions drastically, or (b) having a person, group, or agency of low perceived credibility try to persuade people to accept something. The latter factor seems to have been the case for Benton County.

The proposed project received extensive local newspaper coverage. The inferred impact upon citizen attitudes was similar to that observed in another location, Harris County, Texas.

Not too far from the proposed site of an industrial waste disposal operation in Harris County is the evidence of a very badly managed early disposal operation. The lagoon dikes had eroded and crumbled, allowing a great deal of waste oil to flow over the surrounding area. This killed most of the plant life. The firm that had owned this operation had simply quit, leaving everything. Even though this incident had occurred several years earlier, there was a strong residual impact on the attitudes of citizens living in the vicinity of the operation. Since the operation had not received extensive news coverage, the impact on attitudes toward it was restricted in scope. This suggests that prior experience (and exposure) of a county with disposal operations must be included in the criteria for selection of an NDS location. This type of information would also be critical to development of a successful strategy for introduction of an NDS.

Behavioral Model: Judgmental Data Input

Based upon the information discussed in the previous section, several categories were established for classification of information pertaining to these "other" variables. These categories were established in the course of investigating and resolving the conflicts between the county receptivity rankings on the basis of mean ICV score, and subjective impressions of the counties. Judgmental-type data are subsumed by these categories. While the ones identified were critical to a subsequent re-ranking of the surveyed counties, no claim as to comprehensiveness is made. A study of counties other than these

might suggest additional categories equivalent in importance to those identified in this project. The identified categories are as follows:

- **Predominant industry.** This involves not only the nature of the area's primary income producer, but also the extent to which it utilizes land, and the feelings of citizens as to whether an NDS represents appropriate land usage.
- **Proximity to a large city.** This is assumed to reflect general level of sophistication, which probably is related to receptiveness to an NDS. Population density should be considered simultaneously as it also relates to NDS receptivity.
- **Recent increase in development of an industry.** This not only involves the increase itself, but also the industry's probable relationship with an NDS—neutral, cooperative, competitive, or conflicting. This relationship may stem from emphasis on the land usage, and/or from the type of industry. There might be competition between an industry such as agriculture and an NDS for land. On the other hand, conflict would probably exist in a situation such as in Sussex County, where the recent increase was in development of recreational activities.
- **Primary basis for residence and median income.** This category focuses on whether individuals reside in the county and work elsewhere, or whether they live and work in the same county. Counties with a preponderance of residents in the latter category are likely to be more receptive to an NDS, especially if the median county income is rather low.
- **Recent experiences with activities similar to those of an NDS.** This was inferred to be an important factor in the relatively low receptivity ranking given Benton County; it also influenced reactions of citizens in Harris County to a proposed industrial waste facility.
- **Number and type of relatively serious problems currently facing citizens.** The more serious the problems currently requiring solutions, the more likely it is that citizens will be nonreceptive to an NDS.

These categories were used subjectively to re-rank the 10 surveyed counties. The following revised ranking of counties as to receptiveness to an NDS is suggested (the rank of 1 is again assigned the county considered the most receptive):

- 1 - Polk County, Texas
- 2 - Harris County, Texas
- 3 - Wayne County, Michigan
- 4 - Sumter County, Alabama
- 5 - Benton County, Washington
- 6 - Ogle County, Illinois
- 7 - Franklin County, Massachusetts
- 8 - Kern County, California
- 9 - Sussex County, New Jersey
- 10 - Montgomery County, Pennsylvania

It is felt that this revised ranking, which takes judgmental information into account, is indicative of the actual feelings of residents within each of the 10 counties.

A set of decision rules was necessary for interested individuals to gain maximum benefit from using these information categories as an aid to decision making. These decision rules would allow formalization of the importance to be attached to each category for a specific situation. The following section describes the decision rules to be used, in conjunction with the decision rules developed for the predictor variables identified through the AID analysis, in assessing probable receptivity of a county to an NDS.

Behavioral Model: Decision Rules

The decision rules presented here are based upon two sources: (a) results of the AID analysis, and (b) the specified judgmental categories. As shown previously in Figure 4, the 11 identified predictor variables were used in the AID analysis to identify subgroups having different mean ICV scores. The manner in which decision rules for the predictor variables were developed is described.

In Table 19, several terminal groups are described by means of two or more predictor variables. These descriptions become the basis for several associated decision rules. An example would be median income. The descriptions of the groups with high ICV scores were reviewed to determine whether median income is related to ICV score. It is, and in a negative direction. Therefore, the associated decision rule for selecting a receptive county is: If the county has a median income of less than \$6,000 it will be more receptive to an NDS.

This same procedure would be used for the other predictor variables as well. The reason that all predictor variables are not considered simultaneously is a function of the AID program operation. The predictors used to describe the more receptive counties will be considered first. In addition, one decision rule will focus on the ICV, as future work with this model will probably include the availability of a behavioral criterion. In such a situation, the ICV would become one of the predictor variables.

The following section describes the procedures and decision rules for determining a county's receptivity to an NDS. First, data should be obtained on the 12 (includes the ICV) predictor variables and the judgmental categories outlined in the preceding section. Data on the proposed locations should then be examined to determine whether the following factors are present:

- County has a median income less than \$6,000.
- Citizens generally believe an NDS will have either no effect or a positive one on property values.
- Citizens are very concerned about the environment.
- County has a high mean score on the intermediate criterion variable ($> 2,769$).

If the county is characterized by such values for these factors, the tentative conclusion should be that it would be receptive to an NDS.

At this point, the judgmental data for the county should be examined. Each judgmental category for the county should be considered, in turn, with weights of 0, 1, or 2 being assigned to each as specified below:

<u>Judgmental Category</u>	<u>Weight</u>	<u>Criterion for Assignment of Weights</u>
Predominant industry	0	If the predominant industry involves use of large areas of land (e.g., agriculture or recreational facilities), and no land is available that is acceptable for an NDS and not valuable for agricultural purposes.
	1	If the predominant industry requires use of large areas of land, and land is available that is unsuitable for use by the predominant industry and is acceptable for an NDS.
	2	If the predominant industry does not require use of large areas of land (e.g., an industrial complex), and suitable land is available for an NDS.
Proximity to a large city- population density	0	If close to a large city and densely populated.
	1	If close to a large city and sparsely populated.
	2	If distant from a large city and sparsely populated.
Recent increase in develop- ment of an industry	0	If the industry associated with the increased activity is such that it might involve conflict or competition for available land. Examples of such industries are recreation and residential construction. This is related to the basis for residence, in that the residential development is due to an influx of citizens working in nearby large cities.
	1	If there has been no recent increase in activity in any industry that might involve conflict or competition for available land.
	2	If there has been a recent increase in activity in any industry that might be complementary to use of available land by an NDS. An example of such

<u>Judgmental Category</u>	<u>Weight</u>	<u>Criterion for Assignment of Weights</u>
Primary basis for residence and median income	2	an industry would be the establishment of a very large industrial complex in the area.
	0	If the median income is greater than \$6,000 and more than 35% of the citizens work outside the county.
	1	If the median income is less than \$6,000 and more than 35% of the citizens work outside the county.
	2	If the median income is less than \$6,000 and less than 35% of the citizens work outside the county.
Recent experiences with activities similar to those of an NDS	0	If there have been recent bad experiences with such activities, or potentially hazardous industrial activities.
	1	If there have been no recent experiences either with such activities, or with potentially hazardous industrial activities.
	2	If there have been recent good experiences with such activities, or with potentially hazardous industrial activities.
Number and type of relatively serious problems	0	Either a large or a moderate number of problems, none of which are environmentally related.
	1	Several problems, some of which are environmentally related.
	2	None or only a single problem.

Two of these categories, Predominant Industry and Recent Experiences, are considered critical to county receptiveness of an NDS. If a 0 is assigned to the county for either of these, no matter what scores are assigned to the other categories, the county should be subjected to a very intense study before initiating any further decisional or implementation activities. If the results of this study are positive, the other judgmental categories should be considered.

For the remaining judgmental categories, the weights assigned a county should be summed. Decisions based upon the summed weights should be as follows:

If the total score for the other four judgmental categories is four or less, the county should be examined at a much more detailed level.

If the total score for these four judgmental categories is greater than four, this is supportive of the tentative decision reached earlier, and the county may with reasonable confidence be selected as a location for an NDS. If the timing is appropriate, the local public information program could also be initiated.

To summarize the decision procedure, candidate counties are examined to determine whether one or more of them is characterized by specific values for (a) median income, (b) perceived effect of an NDS on property values, (c) concern with the environment, and (d) the intermediate criterion variable. If one or more of the counties is so characterized, each is rated on the basis of judgmental categories. If these also have acceptable values, the county will probably have a favorable reaction to an NDS, given a proper introduction strategy.

If the predictor variable values and the ratings of the judgmental categories are in agreement, there should be few problems in locating an NDS in that county. If these values and ratings do not agree, the county should be reexamined to determine the basis for the discrepancy. If the reasons for this discrepancy are not identified, the next set of characteristics in Table 19 should be used to select the next most favorable of the available locations. The judgmental categories would then be rated for this selection. The same procedure previously described would be followed until an acceptable county was identified.

Behavioral Model: Logical Extension

The judgmental categories described previously can be construed as a logical extension of the behavioral model. This extension would be congruent with one broad definition of a behavioral model. This definition states that a behavioral model specifies what data are to be collected, and what operations are to be performed on the data, in order to generate predictions concerning a particular event.

Behavioral Model: Refinement of the Computer-Based Model

Previous discussion of behavioral models has shown that in the model development phase, many probable predictors are included. Then, as in this study, actual data are used as input to the model. Operation of the model, here the AID analysis, results in identification of those variables predictive of the criterion variable. Initial operation of the model frequently results in deletion of a number of candidate independent variables. The 11 predictor variables identified and retained in the model developed for this project were described earlier. The next general step in model development would usually involve crossvalidation.

For the model developed in this project, this next logical step in model development would require a situation where actual reaction to an NDS would be available as a dependent variable. Data would be collected and serve as input to this model to determine the predictive validity of the independent variables. There would be one very important difference between the model presented here and the one used in such a validation. This latter model would include the ICV among the predictor variables. Since the AID analysis requires that continuous predictor variables can be categorized, suggested categories for the ICV are presented in Appendix F for possible future use in this way, together with the categories used for the 11 identified predictor variables.

Behavioral Model: Implications

Throughout this report, the behavioral model has been stressed. One reason has been to emphasize that future studies to assess the social aspects of such programs will probably find it necessary to use a similar approach. Early development of a model is essential for specification of variables relevant to the behavior of interest.

Formalizing the decision rules of such a model allows its continued use as an aid to more effective decision making.

Chapter V

STRATEGIES AND CONTINGENCIES

STRATEGY FOR INTRODUCING REGIONAL PROCESSING FACILITIES TO SELECTED LOCATIONS

The point was made earlier that any public information campaign to introduce an NDS should refer to it as a regional processing facility. Accordingly, the term "regional processing facility" (RPF) will be used throughout this chapter.

Development of an Introduction Program

The extreme diversity of the candidate counties (potential locations for an RPF) makes it impractical within the scope of the current project to develop a public information program tailored for each county. Instead, a general program suitable for any locale was developed, with the goal of creating an atmosphere of public acceptance, and giving some assurance of positive local reaction to the RPF. A description of the general program, examples of the kinds of contingencies that should be considered in tailoring it to a specific location, and relevant decision rules, are presented in this chapter.

Establishing a National Commitment

The first step in the development of such a program is the gathering of data concerning candidate sites. Survey in 10 such locations have now been completed. A behavioral prediction model was generated from the survey data. Together with other information, this model was used in making predictions concerning the receptivity of each county to an RPF. A similar procedure would be followed with additional candidate sites—that is, collection of data as required by the model, operation of the model to predict receptivity, selection of most receptive site, and development of a tailored information program.

Results of the present national survey will necessarily influence the public information program. The primary goal of such an information program is to establish public recognition of hazardous waste disposal as a national problem, and to inform the public that industry and government have a solution to it.

WINNING ACCEPTANCE OF RPFs—THE ROLE OF PUBLIC INFORMATION AND EDUCATION

Purpose

The following is an approach for planning public information activities intended to help gain acceptance of RPFs and to help prevent objections to specific RPF sites.

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Background

Seeking acceptance of an RPF is very much like introducing any new product or service to the public. In plain language, RPFs must be "marketed" skillfully, using many of the same tactics required to gain acceptance of any commercial product or service, from toothpaste to mass transit. One difference between an RPF and other products and services is that it has a greater potential for negative reaction to its introduction.

The entire marketing process—from product packaging to media placement of advertising—is straightforward. Market planning begins with an analysis of the product's functional appeal and an objective assessment of its merits in respect to competitive products or services.

Target markets are then identified. These may be local, national, or international. Once these are identified, individual and demographic (contextual) data about the citizens are used to structure a local market strategy.

Market strategy sets out general objectives, sales goals, and distribution plans, and has a marketing budget. Flowing from the strategy are campaign tactics, including identification of the content of the selling or persuasive message and its themes, consideration of types of media available to penetrate the market most deeply at lowest cost, and creative framing of the selling message.

When campaign planning is complete, communications materials, which may include anything from television commercials to prepared speeches, are produced. Media time and space are purchased for exposure of such materials. Additionally, distribution channels for collateral materials (e.g., information brochures) are set up.

Finally, tools to measure impact on the marketplace (e.g., attitudinal surveys) are available and may be used to check the effectiveness of the marketing plan and to refine the campaign while it is in progress.

Certainly, marketing an everyday brand name product presents a somewhat different set of problems than does the task of creating public support of a system of RPFs and of specific RPF sites. Still, the chief difference in conceptual approach and methods is mostly one of emphasis. Knowledge of the area, its most serious prospects, and how to reach them with an influential message remain central considerations.

Moreover, marketing an element of public policy—such as a national hazardous waste processing facility—requires the delivery of a complex message rather than a relatively simple presentation of a product's merits. The task is to create an atmosphere of public acceptance. In this case, those who will need to accept the RPF will generally not be primary users of its services. Rather, the benefits to the public will be secondary—for example, a cleaner environment, a lessening of negative ecological impacts. The emphasis in motivational communication shifts from conventional media advertising to a variety of public information and education activities.

To underscore a point, the goal of either type of campaign is to create an atmosphere of public acceptance. With a product, acceptance is expressed by an increase in sales. With a public policy, acceptance is expressed through favorable public opinion.

Perceived Costs and Benefits of RPFs

"Building an interstate highway system is good for the country, but I don't want an expressway running through my backyard."

"We need bigger and better airports, but that new one across the river will wreck our bird sanctuaries."

Reflections such as these typify the conflict in American society between technological progress and preservation of social and environmental integrity. We pay for progress. What benefits society in general may offend or inconvenience a few or even a substantial segment of the population.

Though obvious, the potential for negative reaction toward RPFs cannot be overstated. In seeking an approach to public acceptance of RPFs through communications, the following central theme is suggested:

We can and must improve our present methods of hazardous waste disposal. A national hazardous waste disposal system, such as proposed through establishment of RPFs, represents a technological leap beyond present disposal systems. Its benefits far outweigh inconveniences it may impose.

Accepting this as the basic theme of the marketing communication program, evidence and arguments to support it fall into place and will be considered later. Eliciting public acceptance of RPFs involves the orchestration of various forms of contact between RPF local management and both the general public and specific elements of it that form target markets.

Targets for Communications

If the RPF program is to be presented as an enlightened national response to the pressing problem of hazardous waste disposal, then public information efforts need to be directed toward three targets:

- (1) The national populace.
- (2) Local populations around a designated RPF site.
- (3) Key influential persons and groups, both at the national and at the local levels.

Attitudinal Research Results

Research conducted in the accomplishment of this project resulted in identification of three sets of important variables: Contextual Variables (physical/economic environment), Situational Variables (social environment), and Individual Variables (characteristics of individuals and individual attitudes, beliefs, and perceptions concerning the impact of an RPF). From this information, a criterion was developed for determining the feasibility of successful introduction of an RPF in a given county.

For all practical purposes, these county-level attitudinal surveys constitute market research as it might be conducted to determine the marketability of any commercial

product or service. The observed generally favorable attitudes show that RPFs stand a good chance of being accepted if the communications program is competently handled. The results of this project should heavily influence the content of the communications program.

General Sequence for Initiation of Communications Programs

If RPFs are to be presented as part of a national system researched and developed by industry and the Federal government, the system might best be introduced first on a national level.

At some time within this introductory period, activities geared to inform and influence local populaces, and influential persons and groups within them, should be initiated. By this time, the national promotion would have familiarized the general public with the RPF concept.

A SUGGESTED COMMUNICATIONS PROGRAM

Thus far, it appears that there are three probable targets for communications: the nation, populaces around proposed RPF sites, and key influential persons and groups at the local and national levels.

Executing the communications program calls not only for development of communication tools but also for an activities timetable and methods for managing the overall program. Use of information tools may vary from one location to another, though all forms will concentrate on the central campaign theme of a national commitment to provide a better way to handle hazardous waste disposal with supporting messages geared to appeal to various specific interests and concerns.

While only a rough timetable can be specified for all activities, it is possible to be certain about one aspect of program management. This is the necessity to place the entire information program under the direction of a national information coordinator whose responsibilities parallel those of a marketing director in industry. This individual would coordinate all activity at the national level as well as direct a staff of information coordinators working at proposed RPF locations. Both national and local information coordinators would need to establish planning operations well before the communications program formally begins.

National Information Program

The national information program should begin about six months prior to the time approval is to be sought for installation of the first RPF. Public announcement of the RPF program would most likely take place at a press conference held in Washington. The purpose of the campaign would be to disseminate as much information as is available about the system and its advantages over present methods, and to discuss anticipated objections by the public. The primary participants in such a conference would be governmental leaders selected from the agencies that would necessarily be involved in such an endeavor.

A press information kit would be distributed summarizing pertinent facts about the RPF system. Advance copies of the press kit would be sent all national news media and all state governmental agencies concerned with hazardous waste.

An important responsibility of the national public information coordinator would be to respond to public and press inquiries. In addition, printed materials such as a major brochure and a simple question-and-answer booklet for distribution at the local level could be developed during this time frame. In summary, the highlights of the national campaign would be:

- Goal

To foster awareness on a national level of the need for such a system for disposal of hazardous waste.

- Methods

Press Relations

Opening press conference.

Distribution of press information kits.

Production of Campaign Tools

Major brochure.

Question-and-answer pamphlet.

Local Information Program

Available information has established one fact about RPF target counties. Potential for acceptance will vary widely according to the specific mix of three classes of variables:

- Physical and economic environment.
- Social environment.
- Individual demographics, attitudes, beliefs, and perceptions.

Certain combinations of these variables, as discussed earlier in this report, predict an atmosphere favorable to RPF acceptance, other combinations create a hostile setting, and still others create a neutral position.

The same type of data and information used in reaching a decision as to the probable receptivity of a county to an RPF will be extremely valuable to the local information program coordinator (LIPC) in designing and conducting the local program. The campaign planning should begin several months prior to formal application to county authorities for construction of the RPF. While particular behaviors and strategies of the local information program coordinator cannot be completely specified, a general approach and various decision rules can be delineated.

General Approach: As mentioned previously, the LIPC would have access to the same information originally used in selecting a particular county on the basis of probable receptivity to an RPF. The assumption is made here that such data would have been collected within the county in question. It is also assumed that such data will have been collected an appreciable length of time prior to the time the decision to propose an RPF for the county was made. In the event these assumptions are not valid, the information collected during the present project should be used in lieu of more desirable

county-specific data. This information should be reviewed thoroughly by the LIPC. Certain questions with implications for the local campaign must be answered prior to his entrance on the local scene:

- What are the attitudes of the citizens toward an RPF?
- What kinds of information do the people desire before approving establishment of an RPF?
- How close to the nearest town are they willing for the RPF to be built?

Some implications for the local information program are as follows:

- Attitudes

If attitudes toward an RPF are moderately negative or neutral, the information program should stress the central theme of the campaign—there is a real need for efficient means of disposing of hazardous waste and an RPF meets the need, without danger of negative impact on the local environment.

If attitudes toward an RPF are very positive or moderately positive, the central theme would be included, but not stressed.

- Information

An adequate amount of clearly presented and understandable information corresponding to the desires of the citizens must be included in the information program.

- Proximity

The information program should stress that the RPF would not be located too near the outskirts of any town.

In addition to specific inputs to the information program based upon answers to questions, such as those just described, several general considerations will dictate specific aspects of the program. Attention will need to be directed toward providing information relative to the following issues, which generally will be raised by some local elements.

- Impact on local economy.
- Impact on land values of property adjacent to the RPF.
- Impact on land use patterns—perceived appropriateness in usage of the land, whether competition for available land will be involved, whether establishment of the RPF could result in cessation of ongoing or proposed activities (e.g., residential subdivisions).
- Impact on the general environment.

- The prospect of aesthetic degradation to the environment caused by the RPF.
- Safety risks imposed by transportation of hazardous waste to the RPF.

While the first of these can be ascertained in advance, information concerning the remainder of these points can only be collected in the county. For example, impact on the local environment would vary with the type of environment. However, awareness that any or all of these issues could become rallying points for opposition to the RPF makes it mandatory that accurate information on them be collected and included in the local information campaign.

It must be kept in mind that hard evidence refuting each issue may not be available. Where such is the case, a credible authority may frequently be cited with good effect. Also, where it becomes obvious that some objection cannot be conclusively answered, the trade-off benefits that are involved should be stressed. An example of such a situation might be as follows:

- In a relatively flat, treeless location, an RPF would be easily visible for many miles. Since the LIPC would know that this would be the case, he could point it out himself, and then remind the people that some of them would be working there.

Other general themes that should be worked into the local information program include the following:

- New employment opportunities.
- New industry attracted by an RPF and, therefore, working within new and tightly regulated waste disposal standards.
- Safer and cleaner environment.

At this point, the demographics of the county might make desirable the placing of added stress on the implications of benefits such as those listed above. If the county has a relatively low median income (less than \$6,000), is relatively stable or slightly decreasing in population, and is not very near a large metropolitan area, implications such as the following should be emphasized:

- Increased industrial development.
- Increased commercial development.
- Increase in employment opportunities.

However, if the county has a relatively high median income (more than \$6,000), is moderately or significantly increasing in population, and relatively near a large metropolitan area, such implications should be minimized. Instead, emphasis should be given to the positive impact upon the environment and ecology, and, while there may be some local inconvenience, the benefits are too great to reject the site.

The general decision rule is as follows:

- The lower the economic level of a county, the more strongly the direct and indirect economic benefits of an RPF should be stressed.
- The higher the economic level of a county, the more strongly the general ecological and environmental benefits should be stressed, as well as the fact that the RPF itself *will not* contribute to pollution.

The foregoing information provides much direction for selecting content material for the information campaign. An additional influence derives from the behavioral model developed in the course of this project. Eleven independent variables were identified as predictive of the intermediate criterion variable. Of these, only four can be affected by means of an information campaign:

- Level of environmental concern.
- Most acceptable social judgment scale score.
- Perceived RPF impact on property values.
- Feelings concerning traffic carrying waste to the RPF.

The second variable, most acceptable social judgment scale score, refers to the perceived desirability for locating an RPF in the county. Methods for affecting this variable were described earlier in connection with the economic level of the county. A suggested method for affecting each of the other three variables follows:

- Level of environmental concern

The detrimental impact on the environment through the actions of various agencies and industries should be stressed. It should also be emphasized that degradation of the environment does not remain a localized problem, but spreads rapidly with many long-term effects. Many of these environmental problems can be solved by an RPF.

- Perceived RPF impact on property values

The aesthetic aspect should not be overemphasized. In other words, the RPF will not look like a country club. Instead, a reasonable picture of what it will be should be presented, with emphasis that there will be no negative impact on surrounding areas in the form of any kinds of pollutant. There will be no odor from any kind of emission. It should be pointed out that usually a tree line is left around the perimeter of the property if it is located in such terrain. Otherwise, low screens may sometimes be erected around some of the equipment and processing facilities.

- Feeling concerning traffic carrying waste to the RPF

As quickly as feasible, select (if possible) a route for the traffic that by-passes the nearby towns. Determine the load-bearing capacity of the route and, if it is less than will be required, initiate negotiations to participate financially in

upgrading it. Make certain that people learn of this, and stress that the reason for the financial outlay was to avoid inconvenience (not danger) to residents of nearby towns.

The themes just discussed are examples of the basic themes that must be communicated, judged as suitable for all locations. In addition, the LIPC must assess the specific information available concerning his particular location, and focus on those as well in order to have maximum favorable impact on that specific target audience. That is, the information available to him should make clear the specific concerns of his target audience. Knowing this, his communications could be tailored to those specific concerns for maximum impact.

By utilizing the suggestions, decision rules, and information that have been discussed, a professional information manager will encounter few difficulties in structuring a local public information program.

Dissemination Strategy. Given that a body of information is available to the LIPC, how does he set about gaining acceptance for an RPF in a specific county? The first thing that he must remember is that citizen acceptance or rejection of the RPF will not be made on completely logical, rational grounds. In addition to logic, emotionality is important. To counter strictly emotional opposition, the LIPC must have factual information, and the means of getting the opposition's attention and convincing them of his credibility.

One of the best means of accomplishing this is by initially contacting influential people in the community. As shown in Chapter III, Results, of this report, these influentials frequently desire information about an RPF that is different from that requested by the average (random) citizen. Influentials, while concerned with technical aspects of an RPF's operation, are also concerned with such information as financing and regulation. The LIPC should have such information available when influentials are contacted.

Influentials would include officials of local government, industry, business, environmental groups, service organizations, and news media. While this obviously provides early warning to those unalterably opposed to RPFs so that they can begin to organize resistance, it also allows the LIPC to identify his future problems. Learning this at the beginning is better than being surprised later. Opposition will often form, and it is the LIPC's responsibility to plan countertactics.

During this initial research and contact stage, the LIPC will be creating not only a number of personal contacts, but will be building his credibility in the community. Much will depend upon his own acceptance, because he will be the sole representative of the RPF in town.

The tools of his information campaign will include elements such as:

- Copies of the campaign brochure.
- Copies of the question-and-answer brochure.
- A press information kit to cover introduction of the local RPF, corresponding to the previously released national press kit, but including results of research on local RPF community impact.

- A site plan model of the proposed local RPF.
- Copies of a slide presentation describing projected impact of the proposed local RPF.
- Copies of public service broadcast announcements for local use.

Given such material, there are two major ways to disseminate it and gain acceptance of an RPF: (a) rely heavily on mass media for dissemination, and (b) present the information to many groups of individuals. Based upon the results of this study, each of these methods should be used in the following situations:

- In lower economic counties, more attention should be given the second method, as friends and neighbors influence the environmental and ecological attitudes of many in such a county.
- In higher economic counties, more reliance should be placed upon the first method, information dissemination via mass media.

However, neither method should be used to the exclusion of the other. Rather, one should be emphasized more heavily in the appropriate situation.

Irrespective of the method emphasized, the influentials should be involved. Their involvement may be in the form of endorsement, presenting an address, simply sitting on the speaker's platform at a meeting, or participating in making decisions concerning the RPF. The results of this study indicate that influentials are more willing than average (random) citizens to engage in a variety of behaviors to support their positions toward an RPF. To elicit this cooperation, the following conditions must hold:

- They must be convinced that an RPF is worthwhile.
- They must believe that performing the action is congruent with their position in life.
- They must be fully informed as to what activities will be involved.

One means of obtaining the support of the influentials is to involve them in making decisions. Participation in decision-making cannot be overemphasized for effectiveness in eliciting subsequent support for an issue. By requesting cooperation from the influentials in locating the RPF where it will least concern and inconvenience the citizens, the probability of obtaining their full and complete cooperation will be greatly increased. The LIPC should keep in mind that his function is not only to take advantage of opportunities to influence the public favorably through communications, but also to become familiar with local concerns and interests.

As an example of this latter responsibility, the existing relationship between local industry and the community must be evaluated before accepting local industry offers as a resource in the public information program. If the relationship is negative, any dealings with industry by the LIPC would be viewed dimly by the community, and could well work against obtaining community acceptance of an RPF. In these circumstances, such interaction should be kept to a minimum.

Overall, the key to successful establishment of an RPF in a specific locale is the LIPC. The general introduction strategy presented in this section has pointed out some of the local contingencies that must be taken into account when developing a strategy for a specific location. To summarize, these are the highlights of local information campaigns:

- Goal

To gain acceptance of an RPF through communications activities that present RPFs in the best light and overcome major objections to their introduction.

- Methods

Information Development:

Research to provide a factual profile of RPF impact on the community, and on which to base campaign planning.

Personal contact with key influential persons and groups.

Development of thorough understanding of local issues.

Development of an accurate profile of predicted impact on the local community.

Identification of Communications Opportunities.

Formation of Information Campaign:

Local campaign to vary in themes based on county profiles and keyed to RPF benefits most likely to occur in each county.

Communications tools to include campaign brochure, question-and-answer pamphlet, press information kit, local slide presentation, public service broadcast announcements, local RPF site plan.

Information dissemination through media and various groups.

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GLOSSARY

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GLOSSARY

AEC	Atomic Energy Commission
AID	Automatic Interaction Detection
API	Action Potential Index
CRS	Chilton Research Services
EPA	Environmental Protection Agency
GAL	General Activity Level
HumRRO	Human Resources Research Organization
ICV	Intermediate Criterion Variable
Influentials	Individual identified as being influential in county decisions
LIPC	Local Information Program Coordinator
N	Frequency
NDS	National Disposal Site
RPF	Regional Processing Facility
SAM	Summated Attitude Measure

APPENDICES

Appendix A
NATIONAL SURVEY QUESTIONNAIRE

Chilton Research Services
Philadelphia, Pa.

OMB #158-S72011

Study #8335
December, 1972

Time Began _____ A.M. _____ P.M.

Segment # _____

Interview # _____
(1-4)

ENVIRONMENT STUDY

SUGGESTED INTRODUCTION: Good _____, I'm _____ (NAME) _____ from the Chilton Research Services located in Philadelphia, Pennsylvania. We are conducting a study on peoples opinions about local environmental and ecological issues. (GO DIRECTLY INTO Q. 1)

1. How concerned are you about environmental issues and ecology? (READ LIST)

Very concerned	5-5
Concerned	4
Fairly concerned	3
Not very concerned	2
Not concerned at all	1
Don't know	0

SKIP TO Q. 3

2. What problems in particular? (RECORD ONLY THE FIRST TWO MENTIONED)

3. Are there any large plants near here, such as industrial, manufacturing, or chemical processing plants?

Yes	7-1
SKIP TO Q. 9	No
	0K
	9

About how far from you is the nearest one located? (RECORD TO NEAREST 1/2 MILE)

8-

4. How do you feel about the plant?

9-

Preceding page blank

15. About how many hours per week do you spend: (READ ALL ITEMS AND RECORD ANSWERS FOR EACH)

a. Watching TV?	24- 25- 26-
b. Listening to the radio?	27- 28- 29-
c. Reading newspapers?	30- 31- 32-
d. Reading magazines or books?	33- 34- 35-
e. Talking with people outside the family and off the job?	36- 37- 38-

16. Of the people in this community, is there someone whose opinion you would respect on environmental or ecological issues? (OBTAIN NAME AND TITLE)

1. _____
(Name) (Title)

Is there anyone else?

2. _____
(Name) (Title)

17. Which of these four has the most influence on your attitudes concerning ecology and environmental issues? (RECORD IN GRID BELOW, Q.17) (READ LIST)

	Q. 17 Most Influence
a. Your friends	39-1
b. Community groups	2
c. Newspapers, TV, magazines	3
d. State and National Environmental groups	4

One of the problems in getting a clean environment is taking care of hard to handle wastes. Some of these wastes are industrial and come from the manufacturing of everyday products. For example, a very harmful chemical comes from chrome-plating car bumpers. Special facilities are needed to handle that chemical so it won't hurt the environment.

One approach to controlling pollution is to put several of these special facilities around the country. Then the chemicals and other materials which need special handling are moved to the closest facility. That way, local industry is helped and the environment is cleaner.

Of course, not all chemicals and materials are handled the same way. Many of the chemical are recycled and used again and again. Some materials are sealed in containers and buried. Others are just burned.

Some of these special facilities look like a large chemical plant. Others look like a large warehouse. Still others have a large fenced-off area where things are buried. One thing that is the same for all is that they are closely inspected by both state and federal environmental agencies.

These places are sometimes called Regional Processing Facilities. (SHOW SKETCHES) This is an artist sketch of one of them.

18. How do you feel about the idea of Regional Processing Facilities? (READ LIST)

SKIP	Strongly in favor	40-5
TO	In favor	4
Q. 20	Unsure	3
	Not in favor	2
	Very much against	1
	Don't Know	9

19. Why is that?

41-
42-
43-
44-

20. How do you feel about the idea of one
being built in this county? (READ LIST)

SKIP	Strongly in favor	45-5
TO	In favor	4
Q. 22	Insure	3
	Not in favor	2
	Very much against	1
	Don't know	9

50-
51-
52-
53-

22. Suppose you had to decide whether a
Regional Processing Facility would be
built near here. If you could ask for
more information before you had to make
a decision, what would you want to know?

21. Why is that?

46-
47-
48-
49-

23. If someone needed a job, would he be willing to work in a Regional Processing Facility? (The pay would be comparable to other jobs in the area.)

SKIP TO Q. 25	Yes	54-1
	No	2
	DK	9

24. (IF "NO" ASK) Why not? What other reason(s) do you have? (PROBE)

55-
56-

(SHOW CARD A)

25. How willing would you be to have one of these Regional Processing Facilities built within: (READ EACH ITEM AND RECORD THE SCALE NUMBER)

	RECORD #
a. One mile of your community?	57-
b. Five miles of your community?	58-
c. Ten miles of your community?	59-
d. Twenty-five miles of your community?	60-

26. How willing would you be to have the chemicals and materials moved to the plant by truck or train: (READ EACH ITEM AND RECORD SCALE NUMBER)

	RECORD #
a. Through your community?	61-
b. Within one mile of your community?	62-
c. Within 5 miles of your community?	63-

27. How would you prefer to have the materials moved, by train or by truck?

By train	64-1
By truck	2

28. When people are concerned about things like environment and ecology, they may become active. They may do things to support their opinion, whether it is for or against an issue. You may be either for or against the idea of a Regional Processing Facility for handling particular chemicals and other materials.

Either way, could you please tell me how willing you would be to support your opinion by: (SHOW CARD A - READ EACH STATEMENT AND RECORD THE SCALE NUMBER GIVEN FOR EACH).

	RECORD #
a. Attending a public hearing where the issue is debated	65-
b. Helping someone prepare a speech	66-
c. Participating in a public rally	67-
d. Signing a petition which will be published in a newspaper	68-
e. Stopping people on the street and asking for their signature on a petition	69-
f. Distributing literature door-to-door explaining your position on the issue	70-

(SHOW CARD B)

29. Now, I would like you to tell me how effective you think each of these actions would be if you wanted to support your opinions about a Regional Processing Facility.
(READ EACH ITEM AND RECORD SCALE NUMBER)

	Record #
a. Attending a public meeting where the issue is debated	71-
b. Helping someone prepare a speech	72-
c. Participating in a public rally	73-
d. Signing a petition which will be published in a newspaper	74-
e. Stopping people on the street and asking for their signature on a petition	75-
f. Distributing literature door-to-door explaining your position on the issue	76-

END CARD #1
80-1

30. If a Regional Processing Facility were to be built in this county, what do you think would happen to property values here? (READ LIST)

Increase	5-3
Stay the same	2
Decrease	1
Don't Know	9

(SHOW CARD "C")

31. Please read these statements about a Regional Processing Facility. (ALLOW RESPONDENT TIME TO READ THEM.) Please give me the letters of all of the statements which are acceptable to you. (RECORD IN GRID BELOW)
32. Of these statements which you feel are acceptable, which one best describes the way you feel about the Regional Processing Facility? (RECORD IN GRID BELOW)
33. Please give me the letters of all the statements which are not acceptable to you, which do not describe how you feel. (RECORD IN GRID BELOW)
34. For those statements which you feel are not acceptable, which one is most unlike how you feel? (RECORD IN GRID BELOW)

	Q. 32	Q. 33	Q. 34	Q. 35
	Acceptable	Most Acceptable	Not Acceptable	Least Acceptable
a. Locating a Regional Processing Facility here is absolutely essential to our county.	6-1	13-1	14-1	21-1
b. Locating a Regional Processing Facility here <u>will best serve</u> our county.	7-1	2	15-1	2
c. While it is not easy to decide, our county <u>probably will benefit</u> if a Regional Processing Facility is located here.	8-1	3	16-1	3
d. Considering our county, it is <u>hard to decide</u> whether or not it is wise to locate a Regional Processing Facility here.	9-1	4	17-1	4
e. While it is not easy to decide, our county <u>probably will suffer</u> if a Regional Processing Facility is located here.	10-1	5	18-1	5
f. Locating a Regional Processing Facility here <u>will hurt</u> our county.	11-1	6	19-1	6
g. Locating a Regional Processing Facility here <u>will be extremely bad</u> for our county.	12-1	7	20-1	7

NOTE: CHECK TO SEE THAT NO STATEMENT IS RECORDED BOTH AS ACCEPTABLE AND UNACCEPTABLE IN THE GRID ABOVE.

35. Please rate the seriousness of pollution as a problem in this county. (READ LIST)

Very serious	22-5
Serious	4
Fairly serious	3
Not serious	2
Not a problem	1
Don't know	9

(SHOW CARD D)

36. As you see, there are four scales with several numbers on each scale. You are to use the scales to tell us how you feel about several things. You do this by picking a number from each scale. If you were describing a fire station, you might do it this way: If you picked number 4 for Scale 1 -- it would mean that you don't believe a fire station is either bad or good -- you would be neutral. If you chose number 5, you would mean that a fire station is slightly good.

Choosing number 6 would mean you think a fire station is pretty good. Number 7 means that it is extremely good.

If you picked number 3, you would be saying that a fire station is slightly bad. Number 2 would mean you think it is even worse. If you chose a number 1, you would think that it is extremely bad. You do this for each of the four scales.

For each scale, the closer the number you choose is to one end of the scale, the more you think the word at that end of the scale best describes the object.

You are to choose a number from each of the four scales to describe the word which I will read you. I will ask you for the number for each scale.

Just tell me what your first impression is.

Please read the words at the end of each scale carefully.

(READ THE TERM AND THEN READ EACH SCALE. CIRCLE ONE CODE IN EACH ROW, IN THE APPROPRIATE COLUMN.)

Term	Scale							
A. A Chemical Plant	(1) Bad-Good 23-	1	2	3	4	5	6	7
	(2) Safe-Dangerous 24-	7	6	5	4	3	2	1
	(3) Harmful-Helpful 25-	1	2	3	4	5	6	7
	(4) Clean-Dirty 26-	7	6	5	4	3	2	1
B. Regional Processing Facility	(1) Bad-Good 27-	1	2	3	4	5	6	7
	(2) Safe-Dangerous 28-	7	6	5	4	3	2	1
	(3) Harmful-Helpful 29-	1	2	3	4	5	6	7
	(4) Clean-Dirty 30-	7	6	5	4	3	2	1
C. Natural Resources	(1) Bad-Good 31-	1	2	3	4	5	6	7
	(2) Safe-Dangerous 32-	7	6	5	4	3	2	1
	(3) Harmful-Helpful 33-	1	2	3	4	5	6	7
	(4) Clean-Dirty 34-	7	6	5	4	3	2	1
D. Strong Local Economy	(1) Bad-Good 35-	1	2	3	4	5	6	7
	(2) Safe-Dangerous 36-	7	6	5	4	3	2	1
	(3) Harmful-Helpful 37-	1	2	3	4	5	6	7
	(4) Clean-Dirty 38-	7	6	5	4	3	2	1

(SHOW CARD E)

37. For the next two terms, use this card. As you see, the scales are different. You do it just the same way though. (CIRCLE ONE CODE IN EACH ROW IN THE APPROPRIATE COLUMN.)

Term	Scale							
A. A Regional Processing Facility would help save natural resources								
	(1) False-True 39-	1	2	3	4	5	6	7
	(2) Probable-Improbable 40-	7	6	5	4	3	2	1
	(3) Unlikely-Likely 41-	1	2	3	4	5	6	7
	(4) Possible-Impossible 42-	7	6	5	4	3	2	1
B. A Regional Processing Facility would result in a strong local economy								
	(1) False-True 43-	1	2	3	4	5	6	7
	(2) Probable-Improbable 44-	7	6	5	4	3	2	1
	(3) Unlikely-Likely 45-	1	2	3	4	5	6	7
	(4) Possible-Impossible 46-	7	6	5	4	3	2	1

38. We have talked about a Regional Processing Facility. Is there anything like that near here?

SKIP TO Q. 41	Yes	47-1
	No	2
	DK	9

39. How near is it? (RECORD DISTANCE TO NEAREST ONE-HALF MILE)

(48-49)

40. What do you know about its operation?	43. Has anyone ever done anything to show they were against it? <table border="1"> <tr> <td>Yes</td> <td>56-1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> <tr> <td>DK</td> <td>9</td> </tr> </table> SKIP TO Q. 46	Yes	56-1	No	2	DK	9
Yes	56-1						
No	2						
DK	9						
41. How do people feel about it?	44. What did they do? 57- 58- 59- 60- 45. Have there been any issues on this county which upset people so much they tried to do something about it? <table border="1"> <tr> <td>Yes</td> <td>61-1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table> SKIP TO Q. 49	Yes	61-1	No	2		
Yes	61-1						
No	2						
42. Why do they feel that way? 52- 53- 54- 55-	46. What was the issue? 62- 63- 47. What did they do? 64- 65- 66- 67-						

48. Are you: (READ LIST)

Under 20	68-1
In your 20's	2
In your 30's	3
In your 40's	4
In your 50's	5
In your 60's	6
70 or over	7

49. What was your highest level of education?

Elementary School (1-8)	69-1
Some High School	2
Grad High School	3
Some College	4
Grad College	5

Thank Respondent - End Interview.

By Observation

Sex:

Male	70-1
Female	2

County:

Polk Co. Texas	71-1
Harris Co. Texas	2
Franklin Co. Mass.	3
Wayne Co. Mich.	4
Montgomery Co. Pa.	5
Kern Co. Calif.	6
Ogle Co. Ill.	7
Benton Co. Wash.	8
Sussex Co. N.I.	9
Sumter Co. Ala.	0

Type:

Door to door	72-1
Head of Ecology Group	-2
Editor in Chief	-3
President of Student Ecology	-4
Person from Q. 16	-5

End Card 2

80-2

Respondent Information

Segment # _____

Line # _____

Name of Respondent _____

Address _____

City _____ State _____

Area Code _____ Phone # _____

Interviewer _____

Date _____

Time Ended _____ A.M. _____ P.M.

Appendix B
RATIONALE FOR QUESTIONNAIRE ITEMS

RATIONALE FOR QUESTIONNAIRE ITEMS

This Appendix presents the rationale for selection of the items that reflect the factors included in either the social or the individual class of predictor variables in the behavioral model. The number for each item corresponds to the number assigned that item in the questionnaire.

1. How concerned are you about environmental issues and ecology?

The answer reflects the respondent's level of concern for environmental and ecological issues in general.

2. What problems in particular?

This question is asked only if the respondent expressed at least a fairly high level of concern for environmental and ecological issues. By identifying those issues that concern most of the respondents, those related to an NDS's operation can be explicitly dealt with in the later introduction and implementation strategies.

3. Are there any large plants near here, such as industrial, manufacturing, or chemical processing plants?

The intent of this question is to ascertain the respondent's experience with large plants near his residence. It is assumed that prior industrial experience, together with lower levels of concern for environmental issues, may relate to favorability toward establishment of an NDS.

4. About how far from you is the nearest one located?

This question is asked only if the respondent indicated a large plant was located nearby. These responses were reviewed to see whether certain intervening separation resulted in a reduction of the relationship between distance and attitude.

5. How do you feel about the plant?

If the respondent replied positively, the request is made to specify the particular characteristics deemed most important in influencing the way he feels.

6. What has made you feel that way?

This information is considered to be highly relevant to the introduction and implementation strategies. The respondent may assume that an NDS will have characteristics similar to a plant. By identifying these objectionable characteristics for a given area, explicit mention and refutation of them can be included in the information program.

7. Have you ever done anything to express your feelings about the plant?

The information elicited reflects the extent and type of action in which the respondent has previously engaged. If the response is affirmative, this information can be related to the particular characteristics that were reported as being of sufficient intensity to be rated annoying. Inferentially, the past actions engaged in provide clues as to possible future reactions to salient issues.

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8. What did you do to express your feelings?

Responses were used to identify the most frequently taken actions considered supportive of expressing one's position.

9. Are you a member of any civic or fraternal groups?

The information elicited reflects the individual's participation in formal, volunteer organizations.

10. How many?

The purpose of this question is to ascertain the extent of the respondent's willingness and desire to participate in formal, volunteer organizations.

11. How much do you participate in these groups?

See Question 14.

12. Are any of these groups mainly concerned with ecological and environmental issues?

The response indicated the relative number of respondents in the county having membership in such groups, which, in turn, reflects the general salience of environmentally related issues to the citizens.

13. Which one(s)?

This question is included to enable identification to be made of the most influential groups with respect to citizens in a particular county. Identification of the influential groups allows for explicit consideration being given to obtaining their cooperation and participation in an introduction and implementation strategy.

14. About how much do you participate in the environmental group?

The purposes of this question are twofold. The first purpose is to determine whether various segments of the population differentially participate in group activities. This is deemed important. In a related study (TRACOR, 1971), organizational involvement was found to be one of a set of variables predictive of complaint concerning airport noise.

The second purpose is to ascertain which local groups have the largest percentage of active members.

15. About how many hours per week do you spend:

- (a) Watching TV
- (b) Listening to the radio
- (c) Reading newspapers
- (d) Reading magazines or books
- (e) Talking with people outside the family and off the job

Each aspect of Question 15 is focused on a specific category of the respondent's general activity level. Smith (1969) refers to the set of interrelationships among such selected behaviors as a "general activity syndrome." Evidence supporting the view of activism as a personality dimension was presented by Rosen and Komorita (1971).

Both the specific aspects of the general activity level, and the overall level itself, are seen as relevant. A high general level of activity for respondents residing within a particular county reflects a potential for more overt behavior, either pro or con, with respect to the establishment of an NDS within that county. Ratings to this question show the extent of the individual's exposure to mass media, as well as reflecting the type of media to which the respondent has maximum exposure. This information is considered relevant to the introduction and implementation strategies developed.

The last alternative in this question is included to determine the respondent's involvement in informal interpersonal relationships. Attitudes of respondents heavily involved in such relationships are more likely to be representative of the community as a whole than are those of respondents who only minimally participate thusly.

Additionally, in a similar study (TRACOR, 1971), discussion of an issue (requiring such interaction) was determined to be one of the predictor variables of a criterion variable, registering complaints concerning airport noise.

16. Of the people in this community, is there someone whose opinion you would respect on environmental or ecological issues? (The name and position or title were recorded.)

This information is used to identify critical positions and the names of those occupying them within communities located in candidate counties. Occupants of the positions selected by a significant percentage of the respondents were interviewed to determine their attitude toward the NDS concept.

17. Which of these four has the most influence on your attitudes concerning ecology and environmental issues?
- (a) Your friends
 - (b) Community groups
 - (c) Newspapers, TV, magazines
 - (d) State and national environmental groups

Various sources of information are seen as having differing levels of credibility. The purpose of this question is to ascertain, by county and for the combined respondents, which source of information is seen as having the greatest attitudinal impact.

18. How do you feel about the idea of Regional Processing Facilities?

In this question, an NDS was described and the respondent was shown an artist's conception of a typical site (see Figure 5).

The purpose of this question is to ascertain the acceptability to the respondent of the NDS concept. Inferentially, the level of acceptability reflects the respondent's attitude toward the concept.

One of the primary purposes of this project is measurement of citizens' attitudes toward an NDS. Follow-up probes to this question are used only if the respondent indicates a negative reaction to the concept. For introduction and implementation strategies to be effective, it is mandatory to identify the primary points of concern of the citizens.

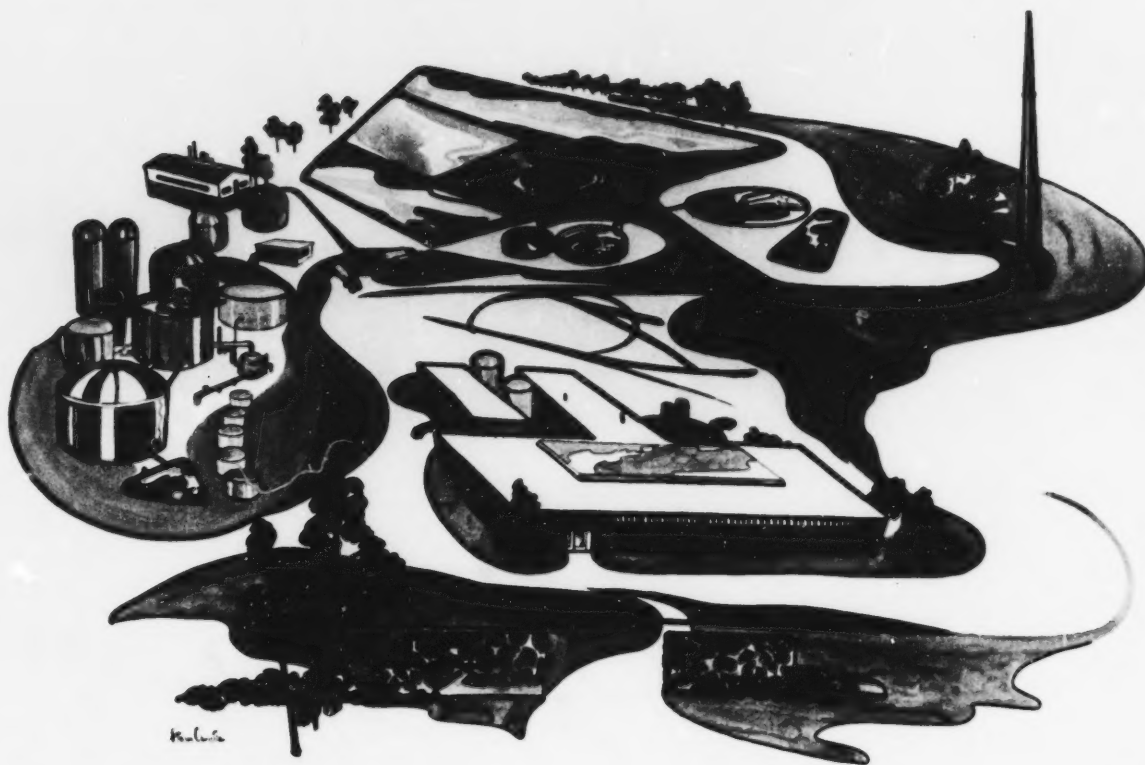


Figure 5. Artist's Conception of NDS
(Used in National Survey)

20. How do you feel about the idea of one being built in this county?

The intent of this question is to ascertain the respondent's position concerning an NDS being located in that county. For attitudinal measures to have face validity, the attitude object must be salient for the respondent.

A follow-up probe is used to determine whether the respondent has any reservations to the establishment of an NDS in the county. It is felt that if the respondent perceives any negative aspects associated with the NDS concept they would be elicited by this question, as it is now salient because of the proposed proximity.

22. Suppose you had to decide whether a Regional Processing Facility would be built near here. If you could ask for more information before you had to make a decision, what would you want to know?

The purpose of this question is to identify those categories of information considered most important by the respondent. Responses have direct implications for the introduction and implementation strategies.

As shown in the work of Tajfel and Wilkes (1963), more important characteristics tend to be mentioned earlier in a free-response situation. Therefore, it is assumed that a question such as this one would elicit what the respondent considers most important to know about an NDS.

23. If someone needed a job, would he be willing to work in a Regional Processing Facility? (The pay would be comparable to other jobs in the area.)

This question represents an attempt to indirectly assess the respondent's attitude toward an NDS and, if negative, to ascertain what was seen as negative about the operation.

25. How willing would you be to have one of these Regional Processing Facilities built within:
- (a) One mile of your community?
 - (b) Five miles of your community?
 - (c) Ten miles of your community?
 - (d) Twenty-five miles of your community?

The intent of this question is to determine whether a particular threshold distance exists for establishment of an NDS in the respondent's county of residence.

26. How willing would you be to have the chemicals and materials to be processed moved to the facility by truck or train:
- (a) Through your community?
 - (b) Within one mile of your community?
 - (c) Within five miles of your community?

The purpose is to establish whether a distance threshold exists concerning transport of wastes to the NDS. It is considered likely that transportation of such wastes might represent a critical problem in successful establishment of such sites.

27. How would you prefer to have the materials moved?
- (a) Train
 - (b) Truck
 - (c) Either
 - (d) Neither

The intent is to identify preferences respondents might have as to one form of transportation or the other.

28 and 29. (See below.)

The work of Rosen and Komorita (1971) demonstrated that a combination of behavioral intentions and perceived effectiveness of the acts had a stronger relationship to actual behavior than did either of the factors considered separately. This combination of factors was referred to as the Action Potential Index (API).

The original study included 14 action-oriented items, which were chosen to reflect three types of behavioral commitment: time, money, and effort. The items were chosen to represent a range of behavioral thresholds for each type of commitment. The set of 14 items chosen by these workers represented the results of an analysis of internal consistency performed on a set of 20 initial items. The split-half reliability of the resulting set of items was .87.

This high reliability coefficient, as well as the high correlation coefficients observed in results of a preliminary survey among the three behavioral dimensions, prompted deletion of several items from the 14 selected by Rosen and Komorita. It is believed that the conceptual approach of these researchers has not been seriously affected by deletion of certain items. The items retained in the questionnaire are as follows.

28. How willing would you be to:
 - (a) Attend a public meeting where the issue was debated.
 - (b) Help someone prepare a speech.
 - (c) Participate in a public rally.
 - (d) Sign a petition which will be published in a newspaper.
 - (e) Stop people on the street and ask for their signature on a petition.
 - (f) Distribute literature door-to-door explaining your position on the issue.
29. How effective do you think each of these actions would be if you wanted to support your opinions about a Regional Processing Facility?

The respondent next rates the effectiveness of each of the items in Q. 28 for supporting his stand (whether pro or con) on the issue. The Action Potential Index is a sum of the product of each item (rated willingness times effectiveness).

30. If a Regional Processing Facility were built in this county, what do you think would happen to property values here?

The purpose of this question is to specifically identify another, very important, aspect of the respondent's attitude toward an NDS, the perceived economic impact upon the respondent.

- 31-34. (See below.)

The respondent was given a sheet of paper on which were written seven statements referring to the establishment of a Regional Processing Facility in the respondent's county of residence. After reading the statement, the respondent was asked to record the letters (matching the seven statements) that were applicable to four questions:

31. The letters of all the statements expressing positions acceptable to him.
32. The letter of the statement best describing his feeling about an NDS.
33. The letters of all the statements expressing positions unacceptable to the respondent.
34. The letter of the statement expressing the most unacceptable statement.

The conceptual framework for these questions is found in the social judgment work of Sherif and others (Sherif, Sherif, and Nebergal, 1965; Sherif and Sherif, 1969). Two methods for attitude measurement have been proposed by these authors, the Own Categories Procedure and the Method of Ordered Alternatives. The latter is by far the more feasible for a study of this nature, based upon such aspects as time required, ease of administration, and other related factors.

Through the administration of the set of seven statements, it is possible to identify the following for each respondent:

- Latitude of acceptance. This included the one position most acceptable to the respondent as well as all other positions that the respondent viewed as acceptable.
- Latitude of rejection. Included in this is the most unacceptable position as well as all other positions seen as unacceptable by the respondent.
- Latitude of noncommitment. Since the individual had the option of responding to all the items, by not choosing to respond, a number of positions on which the respondent felt noncommittal could be ascertained.

Through the work of Sherif and others, it has been demonstrated that the size of these three latitudes varies with the position held by the respondent. Those respondents having more extreme positions also tend to have larger latitudes of rejection and smaller latitudes of noncommitment. It is also possible to infer the extent of the respondent's involvement in the issue based upon the relative sizes of the respondent's latitudes of rejection and noncommitment as compared to the latitude of acceptance. Other work (Tittler, 1967) has shown that the size of the latitude of noncommitment is inversely related to the involvement in the issue by the respondent.

This latter finding is also of importance for the introduction and implementation strategies. Within the context of social judgment theory, attitude change has generally been effected through exposing an individual to a communication that falls outside his latitude of acceptance, but within the latitude of noncommitment. (This assumes that the desired position is not already within the latitude of acceptance.)

Use of this set of questions has numerous advantages over other, more specific measures:

- Allows identification of those most strongly involved in the issue (whether pro or con).
- Allows identification of the positions that must be included in the introduction and implementation communications.
- Allows identification of the percentage of respondents already in favor of the idea.

One significant alteration made in this study, as compared with the work of Sherif, was reduction of the recommended number of statements (9 to 11 in Sherif and Sherif, 1969) to seven. It is not believed that this change will affect the validity of the technique. The statements selected for inclusion in the questionnaire are presented below.

- Locating a Regional Processing Facility here is absolutely essential to our county.
- Locating a Regional Processing Facility here will best serve our county.
- While it is not easy to decide, our county probably will benefit if a Regional Processing Facility is located here.

- Considering our county, it is hard to decide whether or not it is wise to locate a Regional Processing Facility here.
- While it is not easy to decide, our county probably will suffer if a Regional Processing Facility is located here.
- Locating a Regional Processing Facility here will hurt our county.
- Locating a Regional Processing Facility here will be extremely bad for our county.

35. Please rate the seriousness of pollution as a problem in this county.

The purpose of this rating is to identify the perceived severity of pollution as a problem in the county. Responses to this question provided an independent measure of the salience of environmental concerns for respondents (in addition to Question 1).

36. (At this point, Scale II is presented.)

The first two concepts given in this scale were "a chemical plant" and "a regional processing facility." The respondent rated each concept on four bipolar adjective scales. The adjectives used for the ratings are evaluative in nature. This procedure is the semantic differential technique, and the summed ratings to each concept reflect the respondent's attitude toward that concept.

These two concepts are included to allow for a comparison between the respondent's attitude toward a Regional Processing Facility and that reported for a comparable operation. In addition, an assessment of the respondent's perception of the safety of the Regional Processing Facility is available from the response to the second set of bipolar adjectives.

Using the summation approach, the next two concepts rated through use of the same set of bipolar adjectives are "natural resources" and "strong local economy." This is in line with Fishbein's (1963) work concerning an individual's attitude. In this approach, an attitude toward an object is viewed as a function of the individual's evaluation of certain characteristics and the belief that these characteristics are associated with the object.

The semantic differential technique is used to obtain the respondent's evaluation of these two concepts.

37. (At this point, the B scale is used.)

The belief that these concepts (characteristics) are associated with the object is assessed through a modification of Fishbein's B (belief) scale. This scale contains bipolar probabilistic adjectives. The five filler scales originally used by Fishbein were omitted because of time constraints.

The respondent's attitude toward the Regional Processing Facility is the summation over beliefs of the strength of belief and the evaluation of the characteristics.

38. We have talked about a "Regional Processing Facility." Is there anything like that near here?

For those counties surveyed that contain something similar to an NDS, this question ascertained their visibility to the average citizen. If the respondent replied affirmatively, the remaining questions were administered.

39. How near is it?

The purpose of this question is to ascertain how near the respondent perceives the operation to be.

40. What do you know about its operation?

The intent of this question is to discover how salient the operation is for the respondent. Responses to this item reflect the amount of attention that the respondent has paid the operation. If the operation has not bothered or annoyed the respondent to a sufficient degree to become very salient to him, a negative attitude should not be reported.

41. How do people feel about it?

A question phrased in this manner generally elicits the respondent's own perceptions and attitudes. The response to this item reflects the respondent's attitude toward the operation.

42. Why do they feel that way?

The basis for the attitude was the focus of this question. Responses elicited by this question reflect the salient negative or positive characteristics of the operation.

43. Has anyone ever done anything to show they were against it?

The purpose is to determine whether actions have been initiated in the past, or whether no action was taken even though people were unfavorable toward the operation. This question also elicits information concerning the reaction potential of an area.

44. What did they do?

The question focuses on learning what actions had been taken. This information is used in examining the question of whether some people in certain areas are more likely to engage in particular activities than are others.

45. Have there been any issues in this county which upset people so much that they tried to do something about it?

Responses are used in evaluating the reaction potential for an area, as one predictor variable is the history of action-reaction.

46. What was the issue?

This information is used in logical derivation of behavioral thresholds for reaction potential. The judged criticalness of the issue provides inferential clues to such thresholds as well as to the necessary and sufficient "releasers."

47. What did they do?

This question focuses on the form taken by the action-reaction.

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Appendix C
RESPONSES TO QUESTIONNAIRE ITEMS,
RANDOM SAMPLE ONLY, BY COUNTY

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Question 1: How concerned are you about environmental issues and ecology?

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
1 Not Concerned At All	.6 (1)	5.0 (9)	1.1 (2)	1.7 (3)	1.7 (3)	1.1 (2)	1.7 (3)	1.1 (2)	1.7 (3)	6.7 (12)	2.2 (40)
2 Not Very Concerned	5.0 (9)	7.8 (14)	3.9 (7)	8.8 (16)	2.2 (4)	11.1 (20)	5.6 (10)	11.7 (21)	7.2 (13)	7.8 (14)	7.1 (128)
3 Fairly Concerned	20.0 (36)	19.6 (35)	12.8 (23)	21.5 (39)	21.9 (39)	22.2 (40)	24.0 (43)	21.1 (38)	32.8 (59)	20.6 (37)	21.6 (389)
4 Concerned	42.2 (76)	34.6 (62)	34.4 (62)	37.6 (68)	44.4 (79)	34.4 (62)	38.0 (68)	38.3 (69)	35.6 (64)	31.1 (56)	37.1 (666)
5 Very Concerned	27.2 (49)	31.8 (57)	45.0 (81)	28.7 (52)	29.2 (52)	30.6 (55)	28.5 (51)	22.8 (41)	21.1 (38)	33.9 (61)	29.9 (537)
Don't Know	5.0 (9)	1.1 (2)	2.8 (5)	1.7 (3)	.6 (1)	.6 (1)	2.2 (4)	5.0 (9)	1.7 (3)	0.0 (0)	2.1 (37)
Percent of sample	10.0 (180)	10.0 (179)	10.0 (180)	10.1 (181)	9.9 (178)	10.0 (180)	10.0 (179)	10.0 (180)	10.0 (180)	10.0 (180)	10.0 (1797)
Mean	3.95	3.81	4.22	3.84	3.98	3.83	3.88	3.74	3.68	3.78	3.87
Standard Deviation	.87	1.13	.90	1.00	.87	1.03	.95	1.00	.95	1.19	1.00

Analysis of Variance: $F = 4.05$; $df = 9, 1750$; $p < .001$.

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 2: What problems in particular? (Answered by those who responded "Very Concerned," "Concerned," or "Fairly Concerned" to Question 1.)

Response Alternative	County									Total
	Sumit	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	
Pollution Problems	72.4 (116)	48.3 (72)	76.4 (126)	52.5 (83)	72.0 (121)	76.0 (114)	65.6 (105)	60.4 (87)	61.9 (96)	61.8 (94) (1014)
Environmental Problems (other than pollution)	3.1 (5)	16.8 (25)	2.4 (4)	6.3 (10)	3.6 (6)	6.0 (9)	4.4 (7)	9.7 (14)	10.3 (16)	8.6 (13) (109)
Both of the Above	18.1 (29)	32.2 (48)	18.8 (31)	38.0 (60)	24.4 (41)	13.3 (20)	25.6 (41)	26.4 (38)	22.6 (35)	23.7 (36) (379)
All Other	1.9 (3)	1.3 (2)	.6 (1)	.6 (1)	0.0 (0)	0.0 (0)	0.0 (0)	1.4 (2)	3.2 (5)	.7 (1) (15)
Don't Know	4.4 (7)	1.3 (2)	1.8 (3)	2.5 (4)	0.0 (0)	4.7 (7)	4.4 (7)	2.1 (3)	1.9 (3)	5.3 (8) (44)
Percent of sample	10.2 (160)	9.6 (149)	10.6 (165)	10.1 (158)	10.8 (168)	9.6 (150)	10.2 (160)	9.3 (144)	9.9 (155)	9.7 (152) (1561)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 3: Are there any large plants near here, such as industrial, manufacturing, or chemical processing plants?

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
Yes	66.7 (120)	10.6 (19)	47.8 (86)	63.5 (115)	33.7 (60)	53.3 (96)	19.6 (35)	73.3 (132)	80.6 (145)	28.9 (52)	47.9 (860)
No	30.0 (54)	87.7 (157)	47.8 (86)	27.6 (50)	60.7 (108)	40.0 (72)	75.4 (135)	24.4 (44)	14.4 (26)	67.2 (121)	47.5 (853)
Don't Know	3.3 (6)	1.7 (3)	4.4 (8)	8.8 (16)	5.6 (10)	6.7 (12)	5.0 (9)	2.2 (4)	5.0 (9)	3.9 (7)	4.6 (84)
Percent of sample	10.0 (180)	10.0 (179)	10.0 (180)	10.1 (181)	9.9 (178)	10.0 (180)	10.0 (179)	10.0 (180)	10.0 (180)	10.0 (180)	100.0 (1797)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 4: About how far from you is the nearest one located? (Answered only by those who responded "Yes" to Question 3.)

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
1 Less than One Mile	38.7 (46)	44.4 (8)	9.4 (8)	44.3 (51)	6.9 (4)	15.8 (15)	17.1 (6)	52.7 (69)	4.8 (7)	42.3 (22)	27.7 (236)
2 One Two Miles	18.5 (22)	27.8 (5)	11.8 (10)	18.3 (21)	34.5 (20)	22.1 (21)	14.3 (5)	27.5 (36)	6.2 (9)	21.2 (11)	18.8 (160)
3 Two Three Miles	12.6 (15)	11.1 (2)	4.7 (4)	3.5 (4)	10.3 (6)	25.3 (24)	14.3 (5)	8.4 (11)	4.8 (7)	3.8 (2)	9.3 (80)
(Continued)											

(Continued)

Question 4 (Cont.)

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkln	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
4 Three-Five Miles	5.9 (7)	5.6 (1)	29.4 (25)	8.7 (10)	31.0 (18)	20.0 (19)	22.9 (8)	2.3 (3)	12.4 (18)	1.9 (1)	12.9 (110)
5 Five-Ten Miles	2.5 (3)	5.6 (1)	29.4 (25)	10.4 (12)	10.3 (6)	10.5 (10)	25.7 (9)	0.0 (0)	15.9 (23)	9.6 (5)	11.0 (94)
6 10-15 Miles	.8 (1)	0.0 (0)	5.9 (5)	8.7 (10)	6.9 (4)	3.2 (3)	2.9 (1)	1.5 (2)	8.3 (12)	17.3 (9)	5.5 (47)
7 15-20 Miles	10.9 (13)	0.0 (0)	2.4 (2)	2.6 (3)	0.0 (0)	1.1 (1)	0.0 (0)	5.3 (7)	16.6 (24)	1.9 (1)	6.0 (51)
8 Greater than 20 Miles	10.1 (12)	5.6 (1)	7.1 (6)	3.5 (4)	0.0 (0)	0.0 (0)	2.9 (1)	2.3 (3)	28.3 (41)	1.9 (1)	8.1 (69)
Don't Know	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	2.1 (2)	0.0 (0)	0.0 (0)	2.8 (4)	0.0 (0)	.7 (6)
Percent of sample	14.0 (119)	2.1 (18)	10.0 (85)	13.4 (115)	6.8 (58)	11.1 (95)	4.1 (35)	15.4 (131)	17.0 (45)	6.1 (52)	100.0 (853)
Mean	3.12	2.28	4.20	2.77	3.24	3.01	3.49	2.07	5.68	2.85	3.42
Standard Deviation	2.51	1.84	1.80	2.13	1.39	1.41	1.70	1.77	2.16	2.17	2.84

Note: The table presents the percentages of the respondents.

Note: This table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 5: How do you feel about the plant? (Answered by those who responded "Yes" to Question 3.)

Response Alternative	County										Total
	Sumtr	Polk	Harrs	Fklin	Wayne	Mntg	Kern	Ogle	Bttn	Susx	
1 Negative	11.4 (48)	10.5 (2)	60.5 (52)	22.6 (26)	65.0 (39)	44.7 (42)	44.1 (15)	35.6 (47)	39.3 (57)	42.3 (22)	41.0 (350)
2 Neutral	36.2 (42)	36.8 (7)	27.9 (24)	37.4 (43)	25.0 (15)	42.6 (40)	47.1 (16)	26.5 (35)	37.2 (54)	28.8 (15)	34.1 (291)
3 Positive	18.1 (21)	52.6 (10)	11.6 (10)	35.7 (41)	10.0 (6)	10.6 (10)	5.9 (2)	36.4 (48)	20.7 (30)	23.1 (12)	22.3 (190)
Don't Know	4.3 (5)	0.0 (0)	0.0 (0)	4.3 (5)	0.0 (0)	2.1 (2)	2.9 (1)	1.5 (2)	2.8 (4)	5.8 (3)	2.6 (22)
Percent of sample	13.6 (116)	2.2 (19)	10.1 (86)	13.5 (115)	7.0 (60)	11.0 (94)	4.0 (34)	15.5 (132)	17.0 (145)	6.1 (52)	100.0 (853)
Mean	1.76	2.42	1.51	2.14	1.45	1.65	1.61	2.01	1.81	1.80	1.81
Standard Deviation	.75	.69	.70	.77	.68	.67	.61	.86	.77	.82	1.73

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 6: What has made you feel that way? (Answered by those who reported negative feelings about a plant located nearby in Question 5.)

Response Alternative	County										Total
	Sumtr	Polk	Harrs	Fkin	Wayne	Mntg	Kzrn	Ogle	Bttn	Susx	
First Cause Mentioned											
Pollution	97.8 (45)	50.0 (1)	98.0 (50)	87.0 (20)	97.3 (36)	95.2 (40)	93.3 (14)	97.8 (44)	98.2 (55)	95.0 (19)	96.1 (324)
Aesthetic	2.2 (1)	50.0 (1)	2.0 (1)	8.7 (2)	2.7 (1)	2.4 (1)	0.0 (0)	2.2 (1)	1.8 (1)	0.0 (0)	2.7 (9)
Type of Plant	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	6.7 (1)	0.0 (0)	0.0 (0)	5.0 (1)	.6 (2)
Property Values	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	2.4 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	.3 (1)
Management	0.0 (0)	0.0 (0)	0.0 (0)	4.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	.3 (1)
Percent of sample	13.6 (46)	.6 (2)	15.1 (51)	6.8 (23)	11.0 (37)	12.5 (42)	4.5 (15)	13.4 (45)	16.6 (56)	5.9 (20)	100.0 (337)
Second Cause Mentioned											
Pollution	0.0 (0)	0.0 (0)	0.0 (0)	16.7 (1)	0.0 (0)	0.0 (0)	0.0 (0)	20.0 (1)	0.0 (0)	0.0 (0)	5.6 (2)
Aesthetic	100.0 (5)	100.0 (1)	100.0 (5)	66.7 (4)	57.1 (4)	100.0 (4)	100.0 (1)	60.0 (3)	100.0 (1)	0.0 (0)	77.8 (28)
Type of Plant	0.0 (0)	0.0 (0)	0.0 (0)	16.7 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	2.8 (1)

(Continued)

Question 6 (Cont.)

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Property Values	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	20.0 (1)	0.0 (0)	100.0 (1)	5.6 (2)
Management	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	42.9 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	8.2 (3)
Percent of sample	13.9 (5)	2.8 (1)	13.9 (5)	16.6 (6)	19.4 (7)	11.1 (4)	2.8 (1)	13.9 (5)	2.8 (1)	2.8 (1)	100.0 (36)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 7: Have you ever done anything to express your feelings about the plant? (Answered by those who reported negative feelings in Question 5.)

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Yes	15.8 (19)	11.1 (2)	17.4 (15)	8.7 (10)	15.0 (9)	8.6 (8)	7.1 (2)	7.6 (10)	6.3 (9)	17.6 (9)	11.0 (93)
No	84.2 (101)	88.9 (16)	82.6 (71)	91.3 (105)	85.0 (51)	91.4 (85)	92.9 (26)	92.4 (122)	93.8 (135)	82.4 (42)	89.0 (754)
Percent of sample	14.2 (120)	2.1 (18)	10.1 (86)	13.6 (115)	7.1 (60)	11.0 (93)	3.3 (28)	15.6 (132)	17.0 (144)	6.0 (51)	100.0 (847)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 8: What did you do to express your feelings? (Answered only by those who responded "Yes" to Question 7.)

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
First Activity Mentioned											
Talked to friends	41.2 (7)	0.0 (0)	14.3 (2)	44.4 (4)	11.1 (1)	14.3 (1)	50.0 (1)	37.5 (3)	25.0 (2)	33.3 (3)	28.2 (24)
Signed a petition	0.0 (0)	0.0 (0)	14.3 (2)	0.0 (0)	0.0 (0)	14.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	22.2 (2)	5.9 (5)
Contacted plant official	17.6 (3)	50.0 (1)	7.1 (1)	11.1 (1)	11.1 (1)	42.9 (3)	0.0 (0)	12.5 (1)	25.0 (2)	0.0 (0)	15.3 (13)
Contacted public official	29.4 (5)	0.0 (0)	50.0 (7)	11.1 (1)	33.3 (3)	14.3 (1)	50.0 (1)	25.0 (2)	37.5 (3)	44.4 (4)	31.7 (27)
Attended meetings	5.9 (1)	50.0 (1)	7.1 (1)	11.1 (1)	11.1 (1)	0.0 (0)	0.0 (0)	12.5 (1)	0.0 (0)	0.0 (0)	7.1 (6)
Joined group(s)	0.0 (0)	0.0 (0)	7.1 (1)	22.2 (2)	11.1 (1)	14.3 (1)	0.0 (0)	12.5 (1)	12.5 (1)	0.0 (0)	8.2 (7)
Filed lawsuit	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	22.2 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	2.4 (2)
Voted in election	5.9 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.2 (1)
Percent of sample	20.0 (17)	2.4 (2)	16.5 (14)	10.6 (9)	10.6 (9)	8.1 (7)	2.4 (2)	9.4 (8)	9.4 (8)	10.6 (9)	100.0 (85)

(Continued)

Question 8 (Cont.)

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Second Activity Mentioned											
Talked to friends	0.0 (0)	0.0 (0)	33.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	50.0 (1)	0.0 (0)	20.0 (2)
Signed a petition	50.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	50.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	20.0 (2)
Contacted plant official	50.0 (1)	0.0 (0)	33.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	100.0 (1)	0.0 (0)	0.0 (0)	30.0 (3)
Contacted public official	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	50.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	50.0 (1)	0.0 (0)	20.0 (2)
Joined group(s)	0.0 (0)	0.0 (0)	33.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	10.0 (1)
Percent of sample	20.0 (2)	0.0 (0)	30.0 (3)	0.0 (0)	20.0 (2)	0.0 (0)	0.0 (0)	10.0 (1)	20.0 (2)	0.0 (0)	100.0 (10)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 9: Are you a member of any civic or fraternal groups?

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Yes	33.9 (61)	21.2 (38)	30.6 (55)	17.1 (31)	31.5 (56)	20.0 (36)	15.1 (27)	30.6 (55)	38.9 (70)	18.9 (34)	25.8 (463)
No	66.1 (119)	78.8 (141)	69.4 (125)	82.9 (150)	68.5 (122)	80.0 (144)	84.9 (152)	69.4 (125)	61.1 (110)	81.1 (146)	74.2 (1334)
Percent of sample	10.0 (180)	10.0 (179)	10.0 (180)	10.1 (181)	9.9 (178)	10.0 (180)	10.0 (179)	10.0 (180)	10.0 (180)	10.0 (180)	100.0 (1797)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 10: How many (groups)? (Answered by those who responded "Yes" to Question 9.)

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
1	49.2 (30)	63.2 (24)	58.2 (32)	64.5 (20)	55.8 (24)	52.8 (19)	68.0 (17)	60.0 (30)	68.6 (48)	61.8 (21)	59.8 (265)
2	29.5 (18)	28.9 (11)	23.6 (13)	19.4 (6)	27.9 (12)	25.0 (9)	20.0 (5)	14.0 (7)	15.7 (11)	20.6 (7)	22.3 (99)
3	9.8 (6)	7.9 (3)	12.7 (7)	6.5 (2)	7.0 (3)	13.9 (5)	4.0 (1)	16.0 (8)	10.0 (7)	11.8 (4)	10.4 (46)
4	3.3 (2)	0.0 (0)	3.6 (2)	6.5 (2)	7.0 (3)	2.8 (1)	0.0 (0)	6.0 (3)	4.3 (3)	0.0 (0)	3.6 (16)
5	3.3 (2)	0.0 (0)	1.8 (1)	3.2 (1)	2.3 (1)	2.8 (1)	4.0 (1)	2.0 (1)	1.4 (1)	5.9 (2)	2.5 (11)
6	4.9 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	4.0 (1)	2.0 (1)	0.0 (0)	0.0 (0)	1.1 (5)
Don't Know	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	2.8 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	.2 (1)
Percent of sample	13.8 (61)	8.6 (38)	12.4 (55)	7.0 (31)	9.7 (43)	8.1 (36)	5.6 (25)	11.3 (50)	15.8 (70)	7.7 (34)	100.0 (443)
Mean	1.97	1.45	1.67	1.65	1.72	1.74	1.64	1.82	1.54	1.68	1.70
Standard Deviation	1.35	.65	.96	1.08	1.03	1.01	1.29	1.22	.94	1.09	1.08

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 11: How much do you participate in these groups? (Answered by those responding "Yes" to Question 9.)

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
1 Almost None	8.2 (5)	13.2 (5)	18.2 (10)	12.9 (4)	12.5 (7)	8.3 (3)	14.8 (4)	7.3 (4)	21.7 (15)	5.9 (2)	12.8 (59)
2 Not Too Much	8.2 (5)	18.4 (7)	16.4 (9)	19.4 (6)	17.9 (10)	25.0 (9)	14.8 (4)	16.4 (9)	15.9 (11)	14.7 (5)	16.2 (75)
3 A Fair Amount	37.7 (23)	28.9 (11)	32.7 (18)	25.8 (8)	28.6 (16)	19.4 (7)	29.6 (8)	27.3 (15)	33.3 (23)	26.5 (9)	29.9 (138)
4 Quite a Bit	45.9 (28)	39.5 (15)	32.7 (18)	38.7 (12)	41.1 (23)	47.2 (17)	40.7 (11)	49.1 (27)	29.0 (20)	52.9 (18)	40.9 (189)
Don't Know	0.0 (0)	0.0 (0)	0.0 (0)	3.2 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	.2 (1)
Percent of sample	13.2 (61)	8.3 (38)	11.9 (55)	6.7 (31)	12.1 (56)	7.8 (36)	5.8 (27)	11.9 (55)	14.9 (69)	7.4 (34)	100.0 (462)
Mean	3.21	2.95	2.80	2.93	2.98	3.06	2.96	3.18	2.70	3.27	2.99
Standard Deviation	.92	1.06	1.10	1.08	1.05	1.04	1.09	.96	1.12	.93	1.04

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 12: Are any of these groups mainly concerned with ecological and environmental problems?

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Yes	3.3 (2)	15.8 (6)	21.8 (12)	13.3 (4)	3.6 (2)	19.4 (7)	7.4 (2)	36.4 (20)	5.7 (4)	8.8 (3)	13.5 (62)
No	78.7 (48)	71.1 (27)	63.6 (35)	53.3 (16)	78.6 (44)	66.7 (24)	44.4 (12)	47.3 (26)	65.7 (46)	47.1 (16)	63.6 (294)
Inappropriate	18.0 (11)	13.2 (5)	5.5 (3)	23.3 (7)	16.1 (9)	11.1 (4)	29.6 (8)	12.7 (7)	20.0 (14)	41.2 (14)	17.7 (82)
Don't Know	0.0 (0)	0.0 (0)	9.1 (5)	10.0 (3)	1.8 (1)	2.8 (1)	18.5 (5)	3.6 (2)	8.6 (6)	2.9 (1)	5.2 (24)
Percent of sample	13.2 (61)	8.2 (38)	11.9 (55)	6.5 (30)	12.1 (56)	7.8 (36)	5.8 (27)	11.9 (55)	15.2 (70)	7.4 (34)	100.0 (462)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 13. Which ones?

(Responses were not coded.)

Question 14: About how much do you participate in the environmental group? (Answered only by those who responded "Yes" to Question 12.)

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
1 Almost None	23.1 (3)	36.4 (4)	6.7 (1)	27.3 (3)	27.3 (3)	0.0 (0)	20.0 (2)	0.0 (0)	23.5 (4)	11.8 (2)	15.4 (22)
2 Not Too Much	7.7 (1)	9.1 (1)	0.0 (0)	9.1 (1)	18.2 (2)	18.2 (2)	40.0 (4)	37.0 (10)	17.6 (3)	0.0 (0)	16.7 (24)
3 A Fair Amount	23.1 (3)	36.4 (4)	26.7 (4)	18.2 (2)	27.3 (3)	36.4 (4)	30.0 (3)	22.2 (6)	35.3 (6)	47.1 (8)	30.1 (43)
4 Quite a Bit	46.2 (6)	18.2 (2)	66.7 (10)	36.4 (4)	27.3 (3)	45.5 (5)	10.0 (1)	40.7 (11)	23.5 (4)	41.2 (7)	37.1 (53)
Don't Know	0.0 (0)	0.0 (0)	0.0 (0)	9.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	.7 (1)
Percent of sample	9.1 (13)	7.7 (11)	10.4 (15)	7.7 (11)	7.7 (11)	7.7 (11)	7.0 (10)	18.9 (27)	11.9 (17)	11.9 (17)	100.0 (143)
Mean	2.92	2.36	3.53	2.70	2.54	3.27	2.30	3.04	2.58	3.18	2.89
Standard Deviation	1.26	1.21	.83	1.34	1.21	.79	.95	.90	1.12	.95	1.08

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 15: About how many hours per week do you spend:

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
a. Watching TV											
Mean	12.93	21.30	15.08	17.62	15.73	16.06	18.68	14.51	17.99	15.72	16.56
S.D.	9.19	16.45	13.14	13.63	13.71	11.59	14.78	10.58	15.23	11.19	13.29
N	180	179	180	181	178	180	179	179	180	179	1795
b. Listening to Radio											
Mean	7.15	12.66	14.02	12.85	19.51	15.57	12.47	11.17	12.85	14.48	13.26
S.D.	11.13	18.81	18.71	18.37	20.23	20.23	15.46	15.06	17.83	13.78	16.89
N	180	179	179	181	178	174	178	178	180	174	1781
c. Reading Newspapers											
Mean	5.13	3.89	6.30	5.09	7.45	6.87	5.04	5.32	5.64	5.88	5.66
S.D.	3.91	4.24	4.47	4.30	4.78	4.49	3.83	4.03	3.12	3.80	4.24
N	180	179	180	181	178	180	177	180	180	180	1795
d. Reading Magazines or Books											
Mean	6.68	5.42	6.73	6.91	6.79	5.89	5.36	5.09	6.37	6.06	6.13
S.D.	8.30	6.95	8.69	9.02	8.46	6.47	6.92	6.69	6.63	6.24	7.51
N	180	179	180	181	178	180	178	180	180	180	1796
e. Talking with People (outside the family and off the job)											
Mean	9.28	12.00	11.57	10.23	8.06	8.54	10.37	8.24	7.11	11.57	9.70
S.D.	12.06	12.06	12.53	12.59	9.45	9.60	10.89	8.24	7.36	10.40	11.22
N	176	179	176	181	172	180	175	177	180	176	1772

Question 16: Of the people in this community, is there someone whose opinion you would respect on environmental or ecological issues?
(Responses were not coded.)

Question 17: Which of these four has the most influence on your attitudes concerning ecology and environmental issues?

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Suxx	
Your Friends	19.6 (35)	30.7 (55)	15.0 (27)	16.1 (29)	15.7 (28)	12.8 (23)	20.1 (36)	16.7 (30)	13.3 (24)	21.1 (38)	18.1 (325)
Community Groups	8.4 (15)	7.3 (13)	7.8 (14)	8.9 (16)	7.3 (13)	8.3 (15)	3.9 (7)	6.1 (11)	3.9 (7)	8.9 (16)	7.1 (127)
Newspapers, TV, Magazines	57.5 (103)	48.0 (86)	56.7 (102)	54.5 (98)	58.4 (104)	56.1 (101)	53.1 (95)	58.3 (105)	61.7 (111)	51.7 (93)	55.6 (998)
State and National Environmental Gps	14.5 (26)	12.8 (23)	18.3 (33)	18.3 (33)	16.9 (30)	22.8 (41)	21.2 (38)	17.8 (32)	17.8 (32)	17.8 (32)	17.8 (320)
No One	0.0 (0)	0.0 (0)	2.2 (4)	2.2 (4)	1.1 (2)	0.0 (0)	.6 (1)	1.1 (2)	3.3 (6)	.6 (1)	1.1 (20)
Don't Know	0.0 (0)	1.1 (2)	0.0 (0)	0.0 (0)	.6 (1)	0.0 (0)	1.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	.3 (5)
Percent of sample	10.0 (170)	10.0 (179)	10.0 (180)	10.0 (180)	9.9 (178)	10.0 (180)	10.0 (179)	10.0 (180)	10.0 (180)	10.0 (180)	100.0 (1795)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 18: How do you feel about the idea of Regional Processing Facilities?

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
1 Very Much Against	1.1 (2)	.6 (1)	.6 (1)	1.1 (2)	1.7 (3)	.6 (1)	.6 (1)	1.7 (3)	1.7 (3)	.6 (1)	1.0 (18)
2 Not in Favor	1.7 (3)	1.7 (3)	5.0 (9)	3.9 (7)	2.2 (4)	3.3 (6)	3.4 (6)	4.4 (8)	1.7 (3)	4.4 (8)	3.2 (57)
3 Unsure	16.7 (30)	22.3 (40)	21.8 (39)	22.7 (41)	22.5 (40)	22.8 (41)	29.6 (53)	24.4 (44)	23.9 (43)	28.3 (51)	23.5 (422)
4 In Favor	53.3 (96)	50.3 (90)	40.8 (73)	40.3 (73)	48.9 (87)	46.1 (83)	45.8 (82)	45.0 (81)	55.0 (99)	35.6 (64)	46.1 (828)
5 Strongly in Favor	18.9 (34)	25.1 (45)	30.2 (54)	26.5 (48)	21.3 (38)	20.0 (36)	19.0 (34)	19.4 (35)	13.3 (24)	24.4 (44)	21.8 (392)
Don't Know	8.3 (15)	0.0 (0)	1.7 (3)	5.5 (10)	3.4 (6)	7.2 (13)	1.7 (3)	5.0 (9)	4.4 (8)	6.7 (12)	4.4 (79)
Percent of sample	10.0 (180)	10.0 (179)	10.0 (179)	10.1 (181)	9.9 (178)	10.0 (180)	10.0 (179)	10.0 (180)	10.0 (180)	10.0 (180)	100.0 (1796)
Mean	3.95	3.98	3.97	3.92	3.89	3.88	3.81	3.80	3.80	3.85	3.89
Standard Deviation	.76	.77	.89	.89	.83	.81	.81	.88	.76	.89	.83

Analysis of Variance: $F = 1.20$; $df = 9, 1707$; $p < .05$.

Note: The table presents the percentage of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 19: Why is that? (Why did you respond "not in favor of" or "very much against" to Question 18?)

Response Alternative	County										
	Sumtr	Polk	Harris	FkIn	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Just Against Idea	0.0 (0)	100.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	33.3 (1)	0.0 (0)	0.0 (0)	25.0 (2)	11.4 (4)
Cause Pollution	100.0 (1)	0.0 (0)	62.5 (5)	100.0 (3)	0.0 (0)	75.0 (3)	66.7 (2)	0.0 (0)	50.0 (1)	37.5 (3)	51.4 (18)
Inspection Might be Bad	0.0 (0)	0.0 (0)	37.5 (3)	0.0 (0)	100.0 (1)	25.0 (1)	0.0 (0)	75.0 (3)	0.0 (0)	12.5 (1)	25.7 (9)
Input Transportation Problems	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	50.0 (1)	0.0 (0)	2.9 (1)
Might be Built in Area	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	25.0 (1)	0.0 (0)	12.5 (1)	5.7 (2)
Aesthetic	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	12.5 (1)	2.9 (1)
Percent of sample	2.9 (1)	2.9 (1)	22.9 (8)	8.5 (3)	2.9 (1)	11.4 (4)	8.5 (3)	11.4 (4)	5.7 (2)	22.9 (8)	100.0 (35)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 20: How do you feel about the idea of one (Regional Processing Facility) being built in this country?

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bttn	Susx	
1 Very Much Against	1.7 (3)	1.7 (3)	1.7 (3)	2.8 (5)	5.1 (9)	2.2 (4)	1.1 (2)	3.3 (6)	2.8 (5)	2.2 (4)	2.5 (44)
2 Not in Favor	6.7 (12)	3.9 (7)	4.5 (8)	2.8 (5)	2.8 (5)	9.4 (17)	2.8 (5)	10.0 (18)	4.4 (8)	7.2 (13)	5.4 (98)
3 Unsure	22.8 (41)	27.5 (49)	27.4 (49)	29.4 (53)	27.1 (48)	31.1 (56)	28.8 (51)	28.9 (52)	21.1 (38)	37.8 (68)	28.2 (505)
4 In Favor	47.8 (86)	46.6 (83)	44.1 (79)	42.8 (77)	47.5 (84)	43.9 (79)	46.9 (83)	41.1 (74)	55.6 (100)	33.9 (61)	45.0 (806)
5 Strongly in Favor	13.3 (24)	20.2 (36)	21.8 (39)	16.1 (29)	15.8 (28)	10.6 (19)	18.1 (32)	10.0 (18)	12.8 (23)	12.2 (22)	15.1 (270)
Don't Know	7.8 (14)	0.0 (0)	.6 (1)	6.1 (11)	1.7 (3)	2.8 (5)	2.3 (4)	6.7 (12)	3.3 (6)	6.7 (12)	3.8 (68)
Percent of sample	10.1 (180)	9.8 (178)	10.0 (179)	10.1 (180)	9.8 (177)	10.1 (180)	9.8 (177)	10.1 (180)	10.1 (180)	10.1 (180)	100.0 (1791)
Mean	3.70	3.80	3.80	3.71	3.67	3.53	3.80	3.48	3.74	3.50	3.67
Standard Deviation	.87	.87	.89	.89	.96	.90	.81	.95	.85	.90	.90
Analysis of Variance: $F = 3.49$; $df = 9, 1713$; $p < .001$.											

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 21: Why is that? (Why did you respond "not in favor" or "very much against" to Question 20?)

Response Alternative	County										
	Sumtr	Polk	Harris	Fclin	Wayne	Mntg	Kern	Ogle	Entn	Susx	Total
Just Against Idea	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	14.3 (1)	13.3 (2)	0.0 (0)	0.0 (0)	0.0 (0)	9.1 (1)	6.0 (4)
Might Cause Pollution	100.0 (2)	100.0 (3)	62.5 (5)	66.7 (2)	28.6 (2)	40.0 (6)	80.0 (4)	28.6 (2)	50.0 (3)	18.2 (2)	46.2 (31)
Inspection Might be Bad	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	14.3 (1)	0.0 (0)	0.0 (0)	28.6 (2)	0.0 (0)	0.0 (0)	4.5 (3)
Input Transporta- tion Problems	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	33.3 (2)	9.1 (1)	4.5 (3)
Better Land Use	0.0 (0)	0.0 (0)	12.5 (1)	33.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	18.2 (2)	6.0 (4)
Might be Built Near Homes	0.0 (0)	0.0 (0)	12.5 (1)	0.0 (0)	28.6 (2)	13.3 (2)	0.0 (0)	0.0 (0)	0.0 (0)	45.5 (5)	14.8 (10)
Fear of Hazards	0.0 (0)	0.0 (0)	12.5 (1)	0.0 (0)	0.0 (0)	20.0 (3)	0.0 (0)	14.3 (1)	0.0 (0)	0.0 (0)	7.5 (5)
Impact on Property Values	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	14.3 (1)	13.3 (2)	0.0 (0)	14.3 (1)	0.0 (0)	0.0 (0)	6.0 (4)
Aesthetic	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	20.0 (1)	14.3 (1)	16.7 (1)	0.0 (0)	4.5 (3)
Percent of sample	3.0 (2)	4.5 (3)	11.9 (8)	4.5 (3)	10.4 (7)	22.4 (15)	7.5 (5)	10.4 (7)	9.0 (6)	16.4 (11)	100.0 (67)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 22: Suppose you had to decide whether a Regional Processing Facility would be built near here. If you could ask for more information before you had to make a decision, what would you want to know?

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
First Mentioned											
Type of Input	9.7 (6)	5.6 (4)	8.7 (8)	15.3 (9)	12.7 (9)	6.7 (6)	14.5 (8)	17.2 (11)	13.2 (10)	6.8 (4)	10.7 (75)
Procedures Used	53.2 (33)	43.7 (31)	65.2 (60)	44.1 (26)	42.3 (30)	47.8 (43)	54.5 (30)	59.4 (38)	55.3 (42)	55.9 (33)	52.4 (366)
Energy Used	1.6 (1)	0.0 (0)	1.1 (1)	0.0 (0)	1.4 (1)	1.1 (1)	0.0 (0)	1.6 (1)	0.0 (0)	0.0 (0)	.7 (5)
Danger	16.1 (10)	18.3 (13)	6.5 (6)	22.0 (13)	4.2 (3)	16.7 (15)	7.3 (4)	7.8 (5)	9.2 (7)	6.8 (4)	11.4 (80)
Transportation of Inputs	3.2 (2)	2.8 (2)	2.2 (2)	3.4 (2)	2.8 (2)	2.2 (2)	0.0 (0)	1.6 (1)	1.3 (1)	10.2 (6)	2.9 (20)
Aesthetic	3.2 (2)	12.7 (9)	9.8 (9)	5.1 (3)	19.7 (14)	10.0 (9)	1.8 (1)	3.1 (2)	10.5 (8)	1.7 (1)	8.3 (58)
Impact on Local Environment	12.9 (8)	16.9 (12)	6.5 (6)	10.2 (6)	16.9 (12)	15.6 (14)	21.8 (12)	9.4 (6)	10.5 (8)	18.6 (11)	13.6 (95)
Percent of sample	8.9 (62)	10.1 (71)	13.2 (92)	8.4 (59)	10.1 (71)	12.9 (90)	7.9 (55)	9.2 (64)	10.9 (76)	8.4 (59)	100.0 (699)
Second Mentioned											
Type of Input	16.0 (4)	6.8 (3)	13.9 (10)	21.1 (8)	1.9 (1)	5.8 (4)	7.7 (2)	8.9 (4)	12.5 (5)	3.9 (2)	9.3 (43)

(Continued)

Question 22 (Cont.)

Response Alternative	County										
	Sumtr	Polk	Harris	FtIn	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Procedures Used	32.0 (8)	45.5 (20)	38.9 (28)	39.5 (15)	40.7 (22)	24.6 (17)	57.7 (15)	51.1 (23)	42.5 (17)	41.2 (21)	40.1 (186)
Energy Used	4.0 (1)	2.3 (1)	0.0 (0)	0.0 (0)	1.9 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	.6 (3)
Danger	16.0 (4)	18.2 (8)	15.3 (11)	10.5 (4)	9.3 (5)	24.6 (17)	15.4 (4)	6.7 (3)	15.0 (6)	11.8 (6)	14.7 (68)
Transportation of Inputs	4.0 (1)	2.3 (1)	5.6 (4)	13.2 (5)	7.4 (4)	5.8 (4)	0.0 (0)	6.7 (3)	2.5 (1)	15.7 (8)	6.7 (31)
Aesthetic	8.0 (2)	18.2 (8)	19.4 (14)	5.3 (2)	20.4 (11)	14.5 (10)	3.8 (1)	8.9 (4)	10.0 (4)	7.8 (4)	12.9 (60)
Impact on Local	20.0 (5)	6.8 (3)	6.9 (5)	10.5 (4)	18.5 (10)	24.6 (17)	15.4 (4)	17.8 (8)	17.5 (7)	19.6 (10)	15.7 (73)
Percent of sample	5.4 (25)	9.5 (44)	15.5 (72)	8.2 (38)	11.6 (54)	14.9 (69)	5.6 (26)	9.7 (45)	8.6 (40)	11.0 (51)	100.0 (464)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 23: If someone needed a job, would he be willing to work in a Regional Processing Facility (the pay would be comparable to other jobs in the area)?

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Yes	88.9 (160)	93.9 (168)	91.1 (164)	82.9 (150)	89.3 (159)	85.0 (153)	91.0 (162)	88.9 (160)	93.3 (168)	88.3 (159)	89.3 (1603)
No	2.8 (5)	1.1 (2)	2.8 (5)	7.2 (13)	1.7 (3)	3.9 (7)	1.1 (2)	2.8 (5)	.6 (1)	2.2 (4)	2.6 (47)
Don't Know	8.3 (15)	5.0 (9)	6.1 (11)	9.9 (18)	9.0 (16)	11.1 (20)	7.9 (14)	8.3 (15)	6.1 (11)	9.4 (17)	8.1 (146)
Percent of sample	10.0 (180)	10.0 (179)	10.0 (180)	10.1 (181)	9.9 (178)	10.0 (180)	9.9 (178)	10.0 (180)	10.0 (180)	10.0 (180)	100.0 (1796)

Note: The table presents the percentages of the sample with each county, with frequencies noted parenthetically.

Question 24: Why not? What other reason(s) do you have? (Answered by those who responded "No" to Question 23.)

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mnig	Kern	Ogle	Bntn	Susx	
Fear of Hazards	20.0 (1)	50.0 (1)	20.0 (1)	15.4 (2)	0.0 (0)	28.6 (2)	0.0 (0)	20.0 (1)	0.0 (0)	0.0 (0)	17.4 (8)
Wouldn't Like Working Around Materials Like That	0.0 (0)	0.0 (0)	20.0 (1)	15.4 (2)	0.0 (0)	14.3 (1)	50.0 (1)	40.0 (2)	100.0 (1)	0.0 (0)	17.4 (8)
Not Interesting Work	20.0 (1)	0.0 (0)	0.0 (0)	30.8 (4)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	10.9 (5)
Not Qualified	0.0 (0)	0.0 (0)	40.0 (2)	15.4 (2)	0.0 (0)	14.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	50.0 (2)	15.1 (7)
Just Wouldn't Like It	0.0 (0)	50.0 (1)	0.0 (0)	15.4 (2)	100.0 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	10.9 (5)
All Other	60.0 (3)	0.0 (0)	0.0 (0)	7.7 (1)	0.0 (0)	42.9 (3)	50.0 (1)	40.0 (2)	0.0 (0)	50.0 (2)	26.1 (12)
Don't Know	0.0 (0)	0.0 (0)	20.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	2.2 (1)
Percent of sample	10.9 (5)	4.3 (2)	10.9 (5)	28.3 (13)	4.3 (2)	15.2 (7)	4.3 (2)	10.9 (5)	2.2 (1)	8.7 (4)	100.0 (46)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 25a: How willing would you be to have one of these Regional Processing Facilities built within one mile of your community?

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
1 Extremely Unwilling	18.3 (33)	25.1 (45)	31.3 (56)	22.7 (41)	29.1 (51)	23.3 (42)	18.2 (32)	15.6 (28)	24.6 (44)	40.6 (73)	24.9 (445)
2	4.4 (8)	2.2 (4)	7.8 (14)	6.1 (11)	4.0 (7)	8.9 (16)	5.1 (9)	5.0 (9)	2.8 (5)	5.0 (9)	5.1 (92)
3	6.1 (11)	5.6 (10)	5.0 (9)	2.8 (5)	2.3 (4)	9.4 (17)	1.7 (3)	6.1 (11)	5.6 (10)	5.6 (10)	5.0 (90)
4 Unsure	31.1 (56)	25.1 (45)	28.5 (51)	29.8 (54)	20.0 (35)	21.7 (39)	35.2 (62)	40.0 (72)	24.0 (43)	23.9 (43)	27.9 (500)
5	20.6 (37)	11.7 (21)	11.2 (20)	9.4 (17)	10.9 (19)	17.8 (32)	11.4 (20)	12.2 (22)	21.8 (39)	7.8 (14)	13.5 (241)
6	8.9 (16)	10.1 (18)	6.7 (12)	9.4 (17)	14.9 (26)	10.0 (18)	10.8 (19)	11.7 (21)	9.5 (17)	6.1 (11)	9.8 (175)
7 Extremely Willing	10.6 (19)	20.1 (36)	9.5 (17)	19.9 (36)	17.1 (30)	8.9 (16)	17.6 (31)	9.4 (17)	11.7 (21)	10.0 (18)	13.5 (241)
Don't Know	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.7 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.1 (2)	.3 (5)
Percent of sample	10.1 (180)	10.0 (179)	10.0 (179)	10.1 (181)	9.7 (175)	10.1 (180)	9.8 (176)	10.1 (180)	10.0 (179)	10.1 (180)	100.0 (1789)
Mean	4.00	4.07	3.39	4.05	3.94	3.67	4.19	4.01	3.91	3.12	3.83
Standard Deviation	1.85	2.18	2.02	2.14	2.27	1.96	1.99	1.77	2.01	2.11	2.05

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 25b: How willing would you be to have one of these Regional Processing Facilities built within five miles of your community?

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
1 Extremely Unwilling	5.0 (9)	8.9 (16)	16.8 (30)	11.6 (21)	19.4 (34)	8.9 (16)	8.5 (15)	8.9 (16)	14.0 (25)	18.3 (33)	12.0 (215)
2	1.7 (3)	2.8 (5)	3.4 (6)	3.3 (6)	5.1 (9)	4.4 (8)	2.8 (5)	2.8 (5)	.6 (1)	4.4 (8)	3.1 (56)
3	6.7 (12)	3.9 (7)	6.7 (12)	5.0 (9)	4.0 (7)	6.7 (12)	2.3 (4)	6.1 (11)	2.2 (4)	9.4 (17)	5.3 (95)
4 Unsure	19.4 (35)	17.3 (31)	22.9 (41)	22.7 (41)	13.1 (23)	21.7 (39)	32.2 (57)	24.0 (43)	20.7 (37)	19.4 (35)	21.4 (382)
5	30.0 (54)	11.2 (20)	14.5 (26)	17.7 (32)	9.7 (17)	21.7 (39)	11.3 (20)	25.7 (46)	22.3 (40)	10.6 (19)	17.5 (313)
6	15.0 (27)	19.0 (34)	12.8 (23)	14.4 (26)	12.0 (21)	17.8 (32)	13.0 (23)	15.1 (27)	14.5 (26)	8.9 (16)	14.3 (255)
7 Extremely Willing	22.2 (40)	36.9 (66)	22.9 (41)	25.4 (46)	34.9 (61)	18.9 (34)	29.9 (53)	17.3 (31)	25.7 (46)	27.8 (50)	26.1 (468)
Don't Know	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.7 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.1 (2)	.3 (5)
Percent of sample	10.1 (180)	10.0 (179)	10.0 (179)	10.1 (181)	9. (175)	10.1 (180)	9.9 (177)	10.0 (179)	10.0 (179)	10.1 (180)	100.0 (1789)
Mean	5.02	5.24	4.45	4.76	4.67	4.72	4.94	4.69	4.83	4.39	4.77
Standard Deviation	1.57	1.91	2.06	1.93	2.32	1.78	1.84	1.71	1.94	2.19	1.94

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 25c: How willing would you be to have one of these Regional Processing Facilities built within ten miles of your community?

Response Alternative	County										
	Sumtr	Polk	Harrs	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
1 Extremely Unwilling	5.6 (10)	5.0 (9)	14.0 (25)	11.6 (21)	15.4 (27)	6.1 (11)	5.1 (9)	8.3 (15)	6.7 (12)	12.8 (23)	9.1 (162)
2	.6 (1)	1.7 (3)	1.1 (2)	2.2 (4)	2.3 (4)	2.2 (4)	3.4 (6)	2.2 (4)	.6 (1)	1.7 (3)	1.8 (32)
3	1.7 (3)	3.4 (6)	1.7 (3)	3.3 ^a (6)	1.1 (2)	2.2 (4)	3.4 (6)	3.3 (6)	3.4 (6)	2.8 (5)	2.6 (47)
4 Unsure	19.4 (35)	13.4 (24)	20.1 (36)	19.9 (36)	14.3 (25)	16.1 (29)	26.6 (47)	21.7 (39)	16.8 (30)	19.4 (35)	18.8 (336)
5	15.6 (28)	11.2 (20)	8.9 (16)	8.8 (16)	9.1 (16)	17.8 (32)	9.0 (16)	23.9 (43)	17.9 (32)	15.0 (27)	13.7 (246,
6	24.4 (44)	10.1 (18)	14.0 (25)	16.0 (29)	12.6 (22)	20.6 (37)	13.0 (23)	15.6 (28)	16.8 (30)	11.1 (20)	15.4 (276)
7 Extremely Willing	32.8 (59)	55.3 (99)	40.2 (72)	38.1 (69)	43.4 (76)	35.0 (63)	39.5 (70)	25.0 (45)	38.0 (68)	36.1 (65)	38.3 (686)
Don't Know	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.7 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.1 (2)	.3 (5)
Percent of sample	10.1 (180)	10.0 (179)	10.0 (179)	10.1 (181)	9.7 (175)	10.1 (180)	9.8 (177)	10.1 (180)	10.0 (179)	10.1 (180)	100.0 (1790)
Mean	5.43	5.75	5.12	5.13	5.15	5.39	5.28	4.97	5.41	5.02	5.27
Standard Deviation	1.61	1.73	2.09	2.02	2.19	1.70	1.78	1.75	1.72	2.03	1.88

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 25d: How willing would you be to have one of these Regional Processing Facilities built within 25 miles of your community?

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
1 Extremely Unwilling	9.4 (17)	10.1 (18)	6.1 (11)	9.4 (17)	6.3 (11)	6.7 (12)	10.2 (18)	7.8 (14)	3.9 (7)	8.9 (16)	7.9 (141)
2	.6 (1)	4.5 (8)	2.2 (4)	1.1 (2)	2.9 (5)	1.7 (3)	2.3 (4)	2.8 (5)	2.8 (5)	1.7 (3)	2.2 (40)
3	1.7 (3)	2.8 (5)	1.7 (3)	2.2 (4)	1.1 (2)	2.2 (4)	2.8 (5)	1.1 (2)	2.8 (5)	2.2 (4)	2.1 (37)
4 Unsure	17.8 (32)	12.8 (23)	17.9 (32)	21.5 (39)	13.7 (24)	13.3 (24)	23.2 (41)	22.2 (40)	14.0 (25)	17.2 (31)	17.4 (311)
5	9.4 (17)	5.0 (9)	7.8 (14)	5.5 (10)	7.4 (13)	8.3 (15)	7.9 (14)	16.1 (29)	14.0 (25)	6.7 (12)	8.8 (158)
6	16.7 (30)	7.3 (13)	10.1 (18)	15.5 (28)	9.7 (17)	14.4 (26)	9.0 (16)	17.8 (32)	11.2 (20)	10.0 (18)	12.2 (218)
7 Extremely Willing	44.4 (80)	57.5 (103)	54.2 (97)	44.8 (81)	57.1 (100)	53.3 (96)	44.6 (79)	32.2 (58)	51.4 (92)	52.2 (94)	49.1 (880)
Don't Know	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.7 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.1 (2)	.3 (5)
Percent of sample	10.1 (180)	10.0 (179)	10.0 (179)	10.1 (181)	9.7 (175)	10.1 (180)	9.8 (177)	10.1 (180)	10.0 (179)	10.1 (180)	100.0 (1790)
Mean	5.45	5.50	5.66	5.38	5.76	5.72	5.22	5.18	5.70	5.53	5.51
Standard Deviation	1.89	2.10	1.81	1.93	1.83	1.80	2.01	1.79	1.68	1.95	1.89

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 26a: How willing would you be to have the chemicals and materials moved to the plant by truck or train *through* your community?

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
1 Extremely Unwilling	21.1 (38)	22.3 (40)	39.7 (71)	19.9 (36)	31.6 (55)	25.7 (46)	19.7 (35)	19.1 (34)	17.8 (32)	55.0 (99)	27.2 (486)
2	5.6 (10)	3.4 (6)	4.5 (8)	5.0 (9)	2.9 (5)	8.4 (15)	5.6 (10)	6.7 (12)	6.1 (11)	2.8 (5)	5.1 (91)
3	6.7 (12)	2.2 (4)	4.5 (8)	3.3 (6)	3.4 (6)	6.7 (12)	3.4 (6)	10.7 (19)	4.4 (8)	3.3 (6)	4.9 (87)
4 Unsure	23.9 (43)	20.1 (36)	22.9 (41)	28.2 (51)	19.0 (33)	26.8 (48)	31.5 (56)	22.5 (40)	25.0 (45)	17.8 (32)	23.8 (425)
5	20.6 (37)	12.8 (23)	11.7 (21)	12.2 (22)	9.8 (17)	16.8 (30)	12.9 (23)	15.7 (28)	16.1 (29)	6.1 (11)	13.5 (241)
6	10.6 (19)	6.7 (12)	7.8 (14)	8.3 (15)	10.9 (19)	5.0 (9)	11.2 (20)	10.1 (18)	11.7 (21)	5.0 (9)	8.7 (156)
7 Extremely Willing	11.1 (20)	31.8 (57)	8.9 (16)	23.2 (42)	20.7 (36)	10.1 (18)	14.6 (26)	15.2 (27)	18.9 (34)	10.0 (18)	16.4 (294)
Don't Know	.6 (1)	.6 (1)	0.0 (0)	0.0 (0)	1.7 (3)	.6 (1)	1.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	.4 (8)
Percent of sample	10.1 (180)	10.0 (179)	10.0 (179)	10.1 (181)	9.6 (174)	10.0 (179)	10.0 (178)	10.0 (178)	10.1 (180)	10.1 (180)	100.0 (1788)
Mean	3.94	4.46	3.21	4.25	3.90	3.56	4.06	4.00	4.26	2.72	3.84
Standard Deviation	1.96	2.30	2.11	2.13	2.35	1.96	2.00	2.01	2.04	2.16	2.16

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 26b: How willing would you be to have the chemicals and materials moved to the plant by truck or train within one mile of your community?

Response Alternative	County										
	Sumtr	Polk	Harris	Fkln	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
1 Extremely Unwilling	10.6 (19)	10.1 (18)	28.5 (51)	15.5 (28)	25.3 (44)	18.5 (33)	13.5 (24)	10.7 (19)	14.4 (26)	47.2 (85)	19.4 (347)
2	3.9 (7)	3.9 (7)	7.3 (13)	5.5 (10)	4.6 (8)	8.4 (15)	7.3 (13)	6.2 (11)	4.4 (8)	5.6 (10)	5.7 (102)
3	2.8 (5)	3.4 (6)	7.8 (14)	3.3 (6)	4.6 (8)	7.3 (13)	3.9 (7)	10.7 (19)	3.9 (7)	1.7 (3)	4.9 (88)
4 Unsure	22.2 (40)	17.9 (32)	21.8 (39)	27.1 (49)	18.4 (32)	19.7 (35)	28.1 (50)	21.3 (38)	21.7 (39)	17.8 (32)	21.6 (386)
5	26.7 (48)	9.5 (17)	10.6 (19)	13.3 (24)	9.2 (16)	22.5 (40)	15.2 (27)	16.3 (29)	18.3 (33)	8.9 (16)	15.1 (269)
6	16.1 (29)	13.4 (24)	10.6 (19)	12.7 (23)	12.1 (21)	12.4 (22)	10.1 (18)	16.9 (30)	13.9 (25)	5.6 (10)	12.4 (221)
7 Extremely Willing	17.2 (31)	41.3 (74)	13.4 (24)	22.7 (41)	24.1 (42)	10.7 (19)	20.8 (37)	18.0 (32)	23.3 (42)	13.3 (24)	20.5 (366)
Don't Know	.6 (1)	.6 (1)	0.0 (0)	0.0 (0)	1.7 (3)	.6 (1)	1.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	.4 (8)
Percent of sample	10.1 (180)	10.0 (179)	10.0 (179)	10.1 (181)	9.6 (174)	10.0 (178)	10.0 (178)	10.0 (178)	10.1 (180)	10.1 (180)	100.0 (1787)
Mean	4.69	5.20	3.64	4.46	4.16	3.99	4.39	4.49	4.60	3.06	4.27
Standard Deviation	1.78	2.02	2.14	2.03	2.31	1.95	1.97	1.88	2.00	2.27	2.11

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 26c: How willing would you be to have the chemicals and materials moved to the plant by truck or train *within five miles* of your community?

Response Alternative	County										
	Sumtr	Polk	Harris	Fklin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
1 Extremely Unwilling	5.6 (10)	5.6 (10)	14.0 (25)	9.4 (17)	17.2 (30)	10.1 (18)	5.6 (10)	5.1 (9)	7.2 (13)	18.3 (33)	9.8 (175)
2	2.2 (4)	2.2 (4)	3.9 (7)	3.9 (7)	2.3 (4)	2.8 (5)	1.1 (2)	.6 (1)	3.9 (7)	2.2 (4)	2.5 (45)
3	3.3 (6)	.6 (1)	5.0 (9)	2.8 (5)	6.3 (11)	3.9 (7)	4.5 (8)	5.6 (10)	5.0 (9)	7.2 (13)	4.4 (79)
4 Unsure	13.9 (25)	12.3 (22)	22.3 (40)	23.2 (42)	10.3 (18)	18.0 (32)	21.9 (39)	21.3 (38)	12.8 (23)	20.0 (36)	17.6 (315)
5	16.7 (30)	11.7 (21)	16.2 (29)	13.8 (25)	13.8 (24)	23.6 (42)	15.2 (27)	20.2 (36)	14.4 (26)	13.9 (25)	15.9 (285)
6	26.1 (47)	14.5 (26)	14.5 (26)	14.4 (26)	13.2 (23)	19.7 (35)	15.7 (28)	18.0 (32)	23.3 (42)	10.0 (18)	17.0 (303)
7 Extremely Willing	31.7 (57)	52.5 (94)	24.0 (43)	32.6 (59)	35.1 (61)	21.3 (38)	34.8 (62)	29.2 (52)	33.3 (60)	28.3 (51)	32.4 (577)
Don't Know	.6 (1)	.6 (1)	0.0 (0)	0.0 (0)	1.7 (3)	.6 (1)	1.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	.4 (8)
Percent of sample	10.1 (180)	10.0 (179)	10.0 (179)	10.1 (181)	9.6 (174)	10.0 (178)	10.0 (178)	10.0 (178)	10.1 (180)	10.1 (180)	100.0 (1787)
Mean	5.40	5.78	4.62	5.02	4.84	4.88	5.29	5.22	5.27	4.52	5.08
Standard Deviation	1.66	1.71	2.00	1.91	2.22	1.81	1.71	1.62	1.83	2.16	1.90

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 27: How would you prefer to have the materials moved, by train or by truck?

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
By Train	67.2 (121)	46.4 (83)	68.9 (124)	57.5 (104)	70.6 (125)	72.8 (131)	59.0 (105)	50.3 (90)	56.5 (100)	66.7 (120)	61.6 (1103)
By Truck	30.6 (55)	49.7 (89)	22.8 (41)	34.8 (63)	23.2 (41)	22.2 (40)	33.7 (60)	42.5 (76)	27.7 (49)	29.4 (53)	31.7 (567)
Either	.6 (1)	2.2 (4)	3.9 (7)	4.4 (8)	3.4 (6)	3.3 (6)	4.5 (8)	6.7 (12)	11.3 (20)	1.7 (3)	4.1 (75)
Neither	1.1 (2)	.6 (1)	1.7 (3)	1.1 (2)	.6 (1)	.6 (1)	0.0 (0)	.6 (1)	0.0 (0)	1.7 (3)	.8 (14)
Don't Know	.6 (1)	1.1 (2)	2.8 (5)	2.2 (4)	2.3 (4)	1.1 (2)	2.8 (5)	0.0 (0)	4.5 (8)	.6 (1)	1.8 (32)
Percent of sample	10.1 (180)	10.0 (179)	10.1 (180)	10.1 (181)	9.8 (177)	10.1 (180)	9.9 (178)	10.0 (179)	9.8 (177)	10.1 (180)	100.0 (1791)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Questions 28 and 29: Responses to these questions were combined to form the Action Potential Index (API), for which descriptive statistics are presented in Appendix D.

Question 30: If a Regional Processing Facility were to be built in this county, what do you think would happen to property values here?

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
1 Decrease	8.3 (15)	12.8 (23)	23.9 (43)	18.2 (33)	23.2 (41)	30.0 (54)	4.5 (8)	10.6 (19)	10.1 (18)	12.2 (22)	15.4 (276)
2 Stay the Same	28.9 (52)	28.5 (51)	45.0 (81)	32.6 (59)	41.2 (73)	30.0 (54)	27.9 (50)	29.4 (53)	43.6 (78)	22.8 (41)	33.0 (592)
3 Increase	28.3 (51)	46.9 (84)	15.6 (28)	26.0 (47)	10.2 (18)	8.9 (16)	38.0 (68)	27.2 (49)	25.7 (46)	22.8 (41)	25.0 (448)
Don't Know	34.4 (62)	11.7 (21)	15.6 (28)	23.2 (42)	25.4 (45)	31.1 (56)	29.6 (53)	32.8 (59)	20.7 (37)	42.2 (76)	26.6 (479)
Percent of sample	10.0 (180)	10.0 (179)	10.0 (180)	10.1 (181)	9.9 (177)	10.0 (180)	10.0 (179)	10.0 (180)	10.0 (179)	10.0 (180)	100.0 (1795)
Mean	2.31	2.39	1.90	2.10	1.83	1.69	2.48	2.25	2.20	2.18	2.13
Standard Deviation	.69	.73	.68	.76	.65	.69	.62	.71	.64	.76	.73
Analysis of Variance: $F = 17.53$; $df = 9, 1306$; $p < .001$											

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Questions 31, 32, 33, and 34: Responses to these questions were used to construct the Social Judgment Scale. See Appendix E.

Question 35: Please rate the seriousness of pollution as a problem in this county.

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
1 Not a Problem	12.3 (22)	16.4 (29)	.6 (1)	16.1 (29)	1.2 (2)	9.4 (16)	2.8 (5)	11.7 (21)	12.8 (23)	22.3 (40)	10.6 (188)
2 Not Serious	33.0 (59)	22.6 (40)	1.7 (3)	25.6 (46)	4.1 (7)	23.4 (40)	8.5 (15)	35.0 (63)	20.6 (37)	15.1 (27)	19.0 (337)
3 Fairly Serious	35.2 (63)	27.7 (49)	12.8 (23)	27.8 (50)	24.4 (42)	27.5 (47)	34.7 (61)	26.1 (47)	40.0 (72)	29.1 (52)	28.5 (506)
4 Serious	6.7 (12)	18.1 (32)	27.8 (50)	15.0 (27)	41.9 (72)	29.8 (51)	36.9 (65)	15.6 (28)	18.9 (34)	15.1 (27)	22.4 (398)
5 Very Serious	2.8 (5)	13.0 (23)	57.2 (103)	6.7 (12)	26.7 (46)	4.1 (7)	14.2 (25)	4.4 (8)	5.6 (10)	13.4 (24)	14.8 (263)
Don't Know	10.1 (18)	2.3 (4)	0.0 (0)	8.9 (16)	1.7 (3)	5.8 (10)	2.8 (5)	7.2 (13)	2.2 (4)	5.0 (9)	4.7 (82)
Percent of sample	10.1 (179)	10.0 (177)	10.1 (180)	10.1 (180)	9.8 (172)	9.7 (171)	9.9 (176)	10.1 (180)	10.1 (180)	10.1 (179)	100.0 (1774)
Mean	2.50	2.88	4.39	2.68	3.91	2.96	3.53	2.64	2.84	2.81	3.13
Standard Deviation	.93	1.27	.82	1.61	.89	1.07	.95	1.06	1.06	1.34	1.22
Analysis of Variance: $F = 59.03$; $df = 9, 1682$; $p < .001$.											

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Questions 36 and 37: Descriptive statistics for these questions are presented in Appendix D.

Question 38: We have talked about a Regional Processing Facility. Is there anything like that near here?

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Yes	1.1 (2)	.6 (1)	3.9 (7)	3.3 (6)	7.3 (13)	7.8 (14)	1.1 (2)	5.6 (10)	19.4 (35)	1.7 (3)	5.2 (93)
No	87.8 (158)	96.1 (172)	70.3 (142)	75.7 (137)	80.9 (144)	76.1 (137)	93.2 (105)	80.0 (144)	64.4 (116)	90.6 (163)	82.4 (1478)
Inappropriate "Yes"	.6 (1)	1.1 (2)	1.7 (3)	6.1 (11)	5.6 (10)	4.4 (8)	0.0 (0)	3.3 (6)	2.2 (4)	1.1 (2)	2.6 (47)
Don't Know	10.6 (19)	2.2 (4)	15.1 (27)	14.9 (27)	6.2 (11)	11.7 (21)	5.6 (10)	11.1 (20)	13.9 (25)	6.7 (12)	9.8 (176)
Percent of sample	10.0 (180)	10.0 (179)	10.0 (179)	10.1 (181)	9.9 (178)	10.0 (180)	9.9 (177)	10.0 (180)	10.0 (180)	10.0 (180)	100.0 (1794)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 39: How near is it?

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
Less than 1 mile	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	8.7 (2)	4.5 (1)	50.0 (1)	31.3 (5)	0.0 (0)	20.0 (1)	7.2 (10)
1-2 miles	0.0 (0)	0.0 (0)	20.0 (2)	11.8 (2)	21.7 (5)	18.2 (4)	0.0 (0)	18.8 (3)	0.0 (0)	0.0 (0)	11.6 (16)
2-3 miles	33.3 (1)	0.0 (0)	10.0 (1)	11.8 (2)	13.0 (3)	36.4 (8)	0.0 (0)	18.8 (3)	5.4 (2)	0.0 (0)	14.5 (20)
3-5 miles	0.0 (0)	0.0 (0)	0.0 (0)	11.8 (2)	17.4 (4)	22.7 (5)	50.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	8.7 (12)
5-10 miles	33.3 (1)	0.0 (0)	30.0 (3)	17.6 (3)	26.1 (6)	13.6 (3)	0.0 (0)	0.0 (0)	10.8 (4)	20.0 (1)	15.2 (21)
10-15 miles	0.0 (0)	100.0 (3)	20.0 (2)	17.6 (3)	4.3 (1)	4.5 (1)	0.0 (0)	0.0 (0)	8.1 (3)	60.0 (3)	11.6 (16)
15-20 miles	0.0 (0)	0.0 (0)	0.0 (0)	5.9 (1)	8.7 (2)	0.0 (0)	0.0 (0)	0.0 (0)	10.8 (4)	0.0 (0)	5.1 (7)
Greater than 20 miles	33.3 (1)	0.0 (0)	10.0 (1)	17.6 (3)	0.0 (0)	0.0 (0)	0.0 (0)	31.3 (5)	59.5 (22)	0.0 (0)	23.2 (32)
Don't Know	0.0 (0)	0.0 (0)	10.0 (1)	5.9 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	5.4 (2)	0.0 (0)	2.9 (4)
Percent of sample	2.2 (3)	2.2 (3)	7.2 (10)	12.3 (17)	16.8 (23)	15.9 (22)	1.4 (2)	11.6 (16)	26.8 (37)	3.6 (5)	100.0 (138)

(Continued)

Question 39 (Cont.)

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Mean	5.33	6.00	5.10	5.35	3.78	3.36	2.50	3.75	7.19	4.80	5.01
Standard Deviation	2.52	0.00	2.33	2.18	1.76	1.22	2.12	3.04	1.49	2.17	2.40

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 40: What do you know about its operation?

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Plant Function	50.0 (1)	66.7 (2)	66.7 (4)	90.9 (10)	87.6 (13)	66.7 (6)	0.0 (0)	45.5 (5)	73.7 (14)	75.0 (3)	72.5 (58)
Plant Function and Processes Used	50.0 (1)	33.3 (1)	33.3 (2)	9.1 (1)	13.3 (2)	33.3 (3)	0.0 (0)	54.5 (6)	26.3 (5)	25.0 (1)	27.5 (22)
Percent of sample	2.5 (2)	3.8 (3)	7.5 (6)	13.7 (11)	18.7 (15)	11.3 (9)	0.0 (0)	13.7 (11)	23.8 (19)	5.0 (4)	100.0 (80)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 41: How do people feel about it?

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
1 Negative	0.0 (0)	0.0 (0)	30.0 (3)	17.6 (3)	21.7 (5)	22.7 (5)	50.0 (1)	20.0 (3)	13.2 (5)	40.0 (2)	19.6 (27)
2 Neutral	0.0 (0)	0.0 (0)	30.0 (3)	17.6 (3)	52.2 (12)	27.3 (6)	0.0 (0)	20.0 (3)	65.8 (25)	0.0 (0)	37.7 (52)
3 Positive	100.0 (3)	66.7 (2)	20.0 (2)	35.3 (6)	13.0 (3)	22.7 (5)	50.0 (1)	53.3 (8)	18.4 (7)	20.0 (1)	27.5 (38)
Don't Know	0.0 (0)	33.3 (1)	20.0 (2)	29.4 (5)	13.0 (3)	27.3 (6)	0.0 (0)	6.7 (1)	2.6 (1)	40.0 (2)	15.2 (21)
Percent of sample	2.2 (3)	2.2 (3)	7.2 (10)	12.3 (17)	16.7 (23)	15.9 (22)	1.4 (2)	10.9 (15)	27.6 (38)	3.6 (5)	100.0 (138)
Mean	3.00	3.00	1.88	2.25	1.90	2.00	2.00	2.36	2.05	1.67	2.09
Standard Deviation	0.0	0.0	.84	.87	.64	.82	1.41	.84	.58	1.16	.74

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Questions 42, 43, and 44: Too few responses were obtained to make a summarization.

Question 45: Have there been any issues in this county which upset people so much they tried to do something about it?

Response Alternative	County										
	Sumtr	Polk	Harrs	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Yes	55.6 (100)	41.3 (74)	64.3 (116)	56.9 (103)	52.2 (93)	38.3 (69)	35.2 (63)	51.1 (92)	45.6 (82)	40.0 (72)	48.1 (864)
No	44.4 (80)	58.7 (105)	33.9 (61)	42.0 (76)	47.8 (85)	61.7 (111)	64.8 (116)	48.3 (87)	53.9 (97)	60.0 (108)	51.5 (926)
Don't Know	0.0 (0)	0.0 (0)	1.7 (3)	1.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	.6 (1)	.6 (1)	0.0 (0)	.4 (7)
Percent of sample	10.0 (180)	10.0 (179)	10.0 (180)	10.1 (181)	9.9 (178)	10.0 (180)	10.0 (179)	10.0 (180)	10.0 (180)	10.0 (180)	100.0 (1797)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 45: Have there been any issues in this county which upset people so much they tried to do something about it?

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Yes	55.6 (100)	41.3 (74)	64.3 (116)	56.9 (103)	52.2 (93)	38.3 (69)	35.2 (63)	51.1 (92)	45.6 (82)	40.0 (72)	48.1 (864)
No	44.4 (80)	58.7 (105)	33.9 (61)	42.0 (76)	47.8 (85)	61.7 (111)	64.8 (116)	48.3 (87)	53.9 (97)	60.0 (108)	51.5 (926)
Don't Know	0.0 (0)	0.0 (0)	1.7 (3)	1.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	.6 (1)	.6 (1)	0.0 (0)	.4 (7)
Percent of sample	10.0 (180)	10.0 (179)	10.0 (180)	10.1 (181)	9.9 (178)	10.0 (180)	10.0 (179)	10.0 (180)	10.0 (180)	10.0 (180)	100.0 (1797)

Note: This table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 46: What was the issue? (Answered only by those who responded "Yes" to Question 45.)

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Political	1.0 (1)	15.3 (11)	7.0 (8)	3.9 (4)	2.2 (2)	8.7 (6)	6.3 (4)	13.2 (12)	11.0 (9)	8.3 (6)	7.3 (63)
Social	9.2 (9)	8.3 (6)	8.7 (10)	7.8 (8)	68.8 (64)	27.5 (19)	6.3 (4)	15.4 (14)	18.3 (15)	27.8 (20)	19.8 (169)
Environmental	85.7 (84)	55.6 (40)	77.4 (89)	85.4 (88)	23.7 (22)	53.6 (37)	76.2 (48)	46.2 (42)	48.8 (40)	47.2 (34)	61.2 (524)
Economic	0.0 (0)	5.6 (4)	2.6 (3)	1.0 (1)	1.1 (1)	5.8 (4)	7.9 (5)	3.3 (3)	3.7 (3)	12.5 (9)	3.8 (33)
Transportation	1.0 (1)	11.1 (8)	4.3 (5)	1.9 (2)	2.2 (2)	4.3 (3)	1.6 (1)	22.0 (20)	17.1 (14)	2.8 (2)	6.8 (58)
Other	3.1 (3)	2.8 (2)	0.0 (0)	0.0 (0)	2.2 (2)	0.0 (0)	1.6 (1)	0.0 (0)	0.0 (0)	0.0 (0)	.9 (8)
Don't Know	0.0 (0)	1.4 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.2 (1)	1.4 (1)	.3 (3)
Percent of sample	11.5 (98)	8.4 (72)	13.4 (115)	12.0 (103)	10.8 (93)	8.0 (69)	7.3 (63)	10.6 (91)	9.6 (82)	8.4 (72)	100.0 (858)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 47: What did they do? (Answered only by those who responded "Yes" to Question 45.)

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Talked to Friends	3.4 (3)	5.6 (3)	4.0 (4)	1.2 (1)	1.2 (1)	0.0 (0)	2.0 (1)	3.8 (3)	1.6 (1)	7.6 (5)	3.0 (22)
Signed Petitions	28.1 (25)	5.6 (3)	14.1 (14)	14.1 (12)	31.4 (27)	14.8 (8)	14.0 (7)	19.0 (15)	27.9 (17)	18.2 (12)	19.4 (140)
Contacted Public Official	22.5 (20)	24.1 (13)	30.3 (30)	29.4 (25)	11.6 (10)	16.7 (9)	34.0 (17)	15.2 (12)	26.2 (16)	22.7 (15)	23.1 (167)
Attended Meetings	0.0 (0)	11.1 (6)	12.1 (12)	14.1 (12)	32.6 (28)	33.3 (18)	8.0 (4)	20.3 (16)	14.8 (9)	33.3 (22)	17.6 (127)
Joined Groups	14.6 (13)	29.6 (16)	20.2 (20)	32.9 (28)	16.3 (14)	25.9 (14)	34.0 (17)	19.0 (15)	13.1 (8)	6.1 (4)	20.6 (149)
Picketed	0.0 (0)	0.0 (0)	8.1 (8)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.3 (1)	0.0 (0)	0.0 (0)	1.2 (9)
Filed Lawsuit	31.5 (28)	1.9 (1)	9.1 (9)	0.0 (0)	2.3 (2)	0.0 (0)	2.0 (1)	5.1 (4)	3.3 (2)	6.1 (4)	7.1 (51)
Voted in Election	0.0 (0)	22.1 (12)	2.0 (2)	8.2 (7)	4.7 (4)	9.3 (5)	6.0 (3)	16.5 (13)	13.1 (8)	6.1 (4)	8.0 (58)
Percent of sample	12.3 (89)	7.5 (54)	13.7 (99)	11.8 (85)	11.9 (86)	7.5 (54)	6.9 (50)	10.9 (79)	8.4 (61)	9.1 (66)	100.0 (723)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Question 48: Age. Are you:

Response Alternative	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bttn	Susx	
1 Under 20	1.7 (3)	3.4 (6)	4.4 (8)	5.0 (9)	3.9 (7)	3.9 (7)	7.3 (13)	3.3 (6)	2.8 (5)	3.4 (6)	3.9 (70)
2 In Your 20s	31.1 (56)	22.3 (40)	20.6 (37)	23.8 (43)	23.6 (42)	21.1 (38)	22.3 (40)	24.4 (44)	15.0 (27)	24.9 (44)	22.9 (411)
3 In Your 30s	15.6 (28)	15.6 (28)	22.8 (41)	16.0 (29)	19.7 (35)	24.4 (44)	16.2 (29)	17.8 (32)	17.2 (31)	24.9 (44)	19.0 (341)
4 In Your 40s	16.7 (30)	13.4 (24)	25.0 (45)	11.0 (20)	20.8 (37)	23.9 (43)	20.1 (36)	15.6 (28)	20.6 (37)	24.3 (43)	19.1 (343)
5 In Your 50s	15.6 (28)	16.2 (29)	14.4 (26)	14.9 (27)	18.5 (33)	14.4 (26)	14.5 (26)	12.8 (23)	20.0 (36)	10.2 (18)	15.2 (272)
6 In Your 60s	12.2 (22)	19.0 (34)	9.4 (17)	18.8 (34)	8.4 (15)	6.7 (12)	12.3 (22)	20.0 (36)	15.0 (27)	8.5 (15)	13.0 (234)
7 70 or Over	7.2 (13)	10.1 (18)	3.3 (6)	10.5 (19)	5.1 (9)	5.6 (10)	7.3 (13)	6.1 (11)	9.4 (17)	4.0 (7)	6.9 (123)
Percent of sample	10.0 (180)	10.0 (179)	10.0 (180)	10.1 (181)	9.9 (178)	10.0 (180)	10.0 (179)	10.0 (180)	10.0 (180)	9.9 (177)	100.0 (1794)
Mean	3.79	4.14	3.66	4.06	3.72	3.66	3.78	3.94	4.23	3.54	3.85
Standard Deviation	1.68	1.78	1.47	1.85	1.55	1.50	1.72	1.72	1.62	1.47	1.65
Analysis of Variance: $F = 3.46$; $df = 9, 1784$; $p < .001$.											

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

Question 49: What was your highest level of education?

Response Alternative	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
1 Elementary School	2.8 (5)	14.5 (26)	6.7 (12)	9.4 (17)	6.2 (11)	3.3 (6)	10.7 (19)	15.6 (28)	5.6 (10)	9.4 (17)	8.4 (151)
2 Some High School	10.0 (18)	27.4 (49)	12.8 (23)	16.6 (30)	14.1 (25)	7.2 (13)	17.5 (31)	15.0 (27)	13.4 (24)	17.2 (31)	15.1 (271)
3 Graduate High School	25.0 (45)	27.9 (50)	24.4 (44)	42.0 (76)	36.7 (65)	46.1 (83)	33.3 (59)	38.9 (70)	33.5 (60)	45.0 (81)	35.3 (633)
4 Some College	35.6 (64)	17.9 (32)	27.2 (49)	14.9 (27)	28.2 (50)	24.4 (44)	26.0 (46)	18.3 (33)	31.3 (56)	20.0 (36)	24.4 (437)
5 College Graduate	26.7 (48)	12.3 (22)	28.9 (52)	17.1 (31)	14.7 (26)	18.9 (34)	12.4 (22)	12.2 (22)	16.2 (29)	8.3 (15)	16.8 (301)
Percent of sample	10.0 (180)	10.0 (179)	10.0 (180)	10.1 (181)	9.9 (177)	10.0 (180)	9.9 (177)	10.0 (180)	10.0 (179)	10.0 (180)	100.0 (1793)
Mean	3.73	2.86	3.59	3.14	3.31	3.48	3.12	2.97	3.39	3.01	3.26
Standard Deviation	1.05	1.23	1.22	1.17	1.08	.99	1.16	1.21	1.08	1.04	1.16

Analysis of Variance: $F = 11.77$; $df = 9, 1783$; $p < .001$.

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically. The "Don't Know" responses were excluded from computation of the descriptive statistics.

By Observation: Sex

Response Alternative	County										
	Sumtr	Polk	Harris	Fklin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Male	72.8 (131)	40.2 (72)	48.9 (88)	49.2 (89)	51.7 (92)	45.0 (81)	53.1 (95)	67.8 (122)	52.8 (95)	45.6 (82)	52.7 (947)
Female	27.2 (49)	59.8 (107)	51.1 (92)	50.8 (92)	48.3 (86)	55.0 (99)	46.9 (84)	32.2 (58)	47.2 (85)	54.4 (98)	47.3 (850)
Percent of sample	10.0 (180)	10.0 (179)	10.0 (180)	10.1 (181)	9.9 (178)	10.0 (180)	10.0 (179)	10.0 (180)	10.0 (180)	10.0 (180)	100.0 (1797)

Note: The table presents the percentages of the sample within each county, with frequencies noted parenthetically.

Appendix D
RESPONSES TO SCALES BASED UPON
QUESTIONNAIRE ITEMS, RANDOM SAMPLE ONLY, BY COUNTY

Question 25 Scale Summation. Acceptable NDS Proximity Index: Willingness to have an NDS built within one mile, five miles, 10 miles, or 25 miles of your community.

Descriptive Statistics ^a	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
Mean	19.9	20.6	18.6	19.3	19.5	19.5	19.6	18.9	19.9	18.1	19.4
Standard Deviation	5.1	6.0	6.8	6.6	7.4	6.0	5.7	5.6	5.9	6.6	6.2
Frequency	180	179	179	181	172	180	176	179	179	178	1783
Analysis of Variance: $F = 2.35; df = 9,1773; p < .05.$											

^aHigher scores indicate a greater overall willingness to have an NDS located near the community. Minimum Score = 4; Maximum Score = 28.

Question 26 Scale Summation. Waste-Carrying Traffic Proximity Index: Willingness to have wastes moved to the NDS by truck or train through the community within one mile of the community or within five miles of the community.

Descriptive Statistics ^a	County										Total.
	Sumtr	Polk	Harris	FkIn	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
Mean	14.0	15.4	11.5	13.7	12.9	12.4	13.7	13.7	14.1	10.3	13.2
Standard Deviation	4.7	5.3	5.6	5.5	6.4	5.3	4.8	5.0	5.4	5.7	5.5
Frequency	179	178	179	181	171	177	176	178	180	180	1779
Analysis of Variance: $F = 13.40$; $df = 9,1778$; $p < .001$.											

^aHigher scores indicate a greater overall willingness to have waste-carrying traffic move through or near the community. Minimum Score = 3; Maximum Score = 21.

Questions 28 and 29 Crossproduct Summation. Action Potential Index.

Descriptive Statistics ^a	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
Mean	65.7	83.7	66.7	64.3	73.2	68.6	67.7	59.3	58.0	71.7	67.8
Standard Deviation	40.0	43.8	36.3	36.8	39.2	38.9	44.0	34.4	34.2	36.4	38.6
Frequency	180	174	176	176	168	175	170	177	175	175	1746
Analysis of Variance: $F = 6.49$; $df = 9, 1736$; $p < .001$.											

^aHigher scores indicate greater potential for overt activity to support one's position concerning NDSs. Minimum Score = 6; Maximum Score = 294.

Question 36a Scale Summation. Semantic Differential Rating of Chemical Plant.

Descriptive Statistics ^a	County										Total
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	
Mean	16.3	16.7	14.0	14.9	11.9	13.2	16.0	16.1	17.1	12.6	14.9
Standard Deviation	5.5	7.2	6.4	6.0	6.6	5.5	5.8	5.5	5.8	6.5	6.4
Frequency	180	179	180	180	177	179	178	179	180	180	1792

Analysis of Variance: $F = 16.23$; $df = 9, 1782$; $p < .001$.

^aHigher scores indicate more favorable feelings toward a chemical plant. Minimum Score = 4; Maximum Score = 28.

Question 36b Scale Summation. Semantic Differential Rating of Regional Processing Facility Concept.

Descriptive Statistics ^a	County										
	Sumtr	Polk	Harris	Fklin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Mean	20.7	22.1	20.1	20.7	19.8	19.4	20.9	20.4	20.9	19.9	20.5
Standard Deviation	5.0	5.5	5.5	5.5	6.2	4.7	5.0	4.8	4.8	6.1	5.4
Frequency	187	191	190	192	189	181	182	190	191	192	1885

Analysis of Variance: $F = 3.78$; $df = 9, 1875$; $p < .001$.

Analysis of Variance: $F = 3.78$; $df = 9, 1875$; $p < .001$.

^aHigher scores indicate more positive evaluation of the NDS concept. Minimum Score = 4; Maximum Score = 28.

Question 36c Scale Summation. Semantic Differential Rating of Natural Resources.

Descriptive Statistics ^a	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Mean	23.1	23.4	21.8	22.2	20.3	20.7	19.8	20.2	19.6	24.1	21.5
Standard Deviation	4.7	5.3	5.5	5.3	5.9	5.6	4.9	5.2	6.0	5.2	5.6
Frequency	178	177	180	180	176	177	173	179	170	177	1767

Analysis of Variance: $F = 16.37$; $df = 9, 1757$; $p < .001$

Analysis of Variance: $F = 16.37$; $df = 9, 1757$; $p < .001$.

^aHigher scores indicate more positive evaluation of natural resources. Minimum Score = 4; Maximum Score = 28.

Question 36d Scale Summation. Semantic Differential Rating of a Strong Local Economy.

Descriptive Statistics ^a	County										
	Sumtr	Polk	Harrs	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Mean	20.5	20.6	20.5	19.1	19.7	20.9	18.3	20.9	19.5	22.1	20.2
Standard Deviation	4.8	5.6	5.4	5.3	4.8	5.0	4.4	4.5	5.2	5.6	5.9
Frequency	179	178	178	177	174	178	176	178	175	178	1771
Analysis of Variance: $F = 8.14$; $df = 9, 1761$; $p < .001$.											

^aHigher scores indicate more positive evaluation of a strong local economy. Minimum Score = 4; Maximum Score = 28.

Question 37a Scale Summation. Semantic differential rating of the likelihood of an NDS helping to save natural resources.

Descriptive Statistics ^a	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Mean	21.8	23.2	20.9	21.4	22.6	20.6	20.9	21.1	19.6	20.8	21.3
Standard Deviation	5.1	5.4	5.2	5.6	5.1	5.2	5.3	5.5	5.7	6.0	5.5
Frequency	180	179	180	181	174	178	175	180	179	178	1784
Analysis of Variance: $F = 6.35$; $df = 9, 1774$; $p < .001$.											

^aHigher scores indicate a stronger belief that an NDS will help save natural resources. Minimum Score = 4; Maximum Score = 28.

Question 37b Scale Summation. Semantic differential rating of the likelihood of an NDS leading to a strong local economy.

Descriptive Statistics ^a	County										
	Sumtr	Polk	Harris	FtKin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Mean	19.6	21.8	18.8	18.9	19.2	17.8	20.0	18.4	19.3	18.2	19.2
Standard Deviation	5.4	6.1	5.2	5.6	5.8	5.2	5.2	5.3	5.5	5.4	5.6
Frequency	179	179	180	181	174	179	173	180	179	177	1781
Analysis of Variance: $F = 7.46$; $df = 9,1771$; $p < .001$.											

^aHigher scores indicate a stronger belief that an NDS will lead to a strong local economy. Minimum Score = 4; Maximum Score = 28.

Fishbein's Summative Attitudinal Measure (SAM)^a

Descriptive Statistics ^b	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Mean	91.3	10.1	84.4	84.6	85.6	81.4	79.1	82.6	75.2	92.8	85.9
Standard Deviation	30.4	35.3	28.2	28.9	32.0	29.4	27.0	31.0	27.3	34.1	31.2
Frequency	177	176	178	176	172	176	167	177	167	175	1741
Analysis of Variance: $F = 10.32$; $df = 9,1731$; $p < .001$.											

^aEach score times 100.

^bHigher scores indicate a more positive attitude toward the NDS concept. Minimum Score = 32; Maximum Score = 1568.

Standard Activity Measure

Descriptive Statistics ^a	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Mean	3.0	3.0	3.4	3.1	3.2	3.1	3.1	2.8	3.0	3.4	3.1
Standard Deviation	1.4	1.6	1.4	1.4	1.4	1.3	1.2	1.3	1.4	1.4	1.4
Frequency	176	179	176	181	172	180	174	177	180	176	1771
Analysis of Variance: $F = 2.86$; $df = 9, 1761$; $p < .05$.											

^aHigher scores indicate high general activity levels. Minimum Score = 1; Maximum Score = 5.

Intermediate Criterion Variable (ICV)^a

Descriptive Statistics ^b	County										
	Sumtr	Polk	Harris	Fkin	Wayne	Mntg	Kern	Ogle	Bntn	Susx	Total
Mean	24.6	27.6	25.4	24.0	25.4	24.2	24.2	22.8	22.3	26.8	24.8
Standard Deviation	7.7	8.4	7.2	7.2	7.0	6.0	7.6	7.1	6.7	7.3	7.4
Frequency	173	171	170	171	158	172	154	171	162	166	1668
Analysis of Variance: $F = 8.45$; $df = 9, 1658$; $p < .001$.											

^aEach score times 100.

^bMinimum Score = 109; Maximum Score = 1323.

Appendix E

EXTENT OF ENDORSEMENT OF VARIOUS POSITIONS
CONCERNING THE DESIRABILITY OF
AN NDS IN THE COUNTY, BY COUNTY

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EXTENT OF ENDORSEMENT OF VARIOUS POSITIONS CONCERNING THE DESIRABILITY OF AN NDS IN THE COUNTY, BY COUNTY

This Appendix contains 11 figures. Figure 6 shows the percentages of the total random and selected samples choosing each of the following positions on the social judgment scale as (a) their most acceptable position and (b) their least acceptable position. Figures 7-16 present similar information for the random sample only within each county.

The position numbers below correspond to those used for each graph.

<u>Position</u>	<u>Description</u>
1	Locating a Regional Processing Facility here is absolutely essential to our county.
2	Locating a Regional Processing Facility here <u>will best serve</u> our county.
3	While it is not easy to decide, our county <u>probably will benefit if</u> a Regional Processing Facility is located here.
4	Considering our county, it is <u>hard to decide</u> whether or not it is wise to locate a Regional Processing Facility here.
5	While it is not easy to decide, our county <u>probably will suffer if</u> a Regional Processing Facility is located here.
6	Locating a Regional Processing Facility here <u>will hurt</u> our county.
7	Locating a Regional Processing Facility here <u>will be extremely bad</u> for our county.

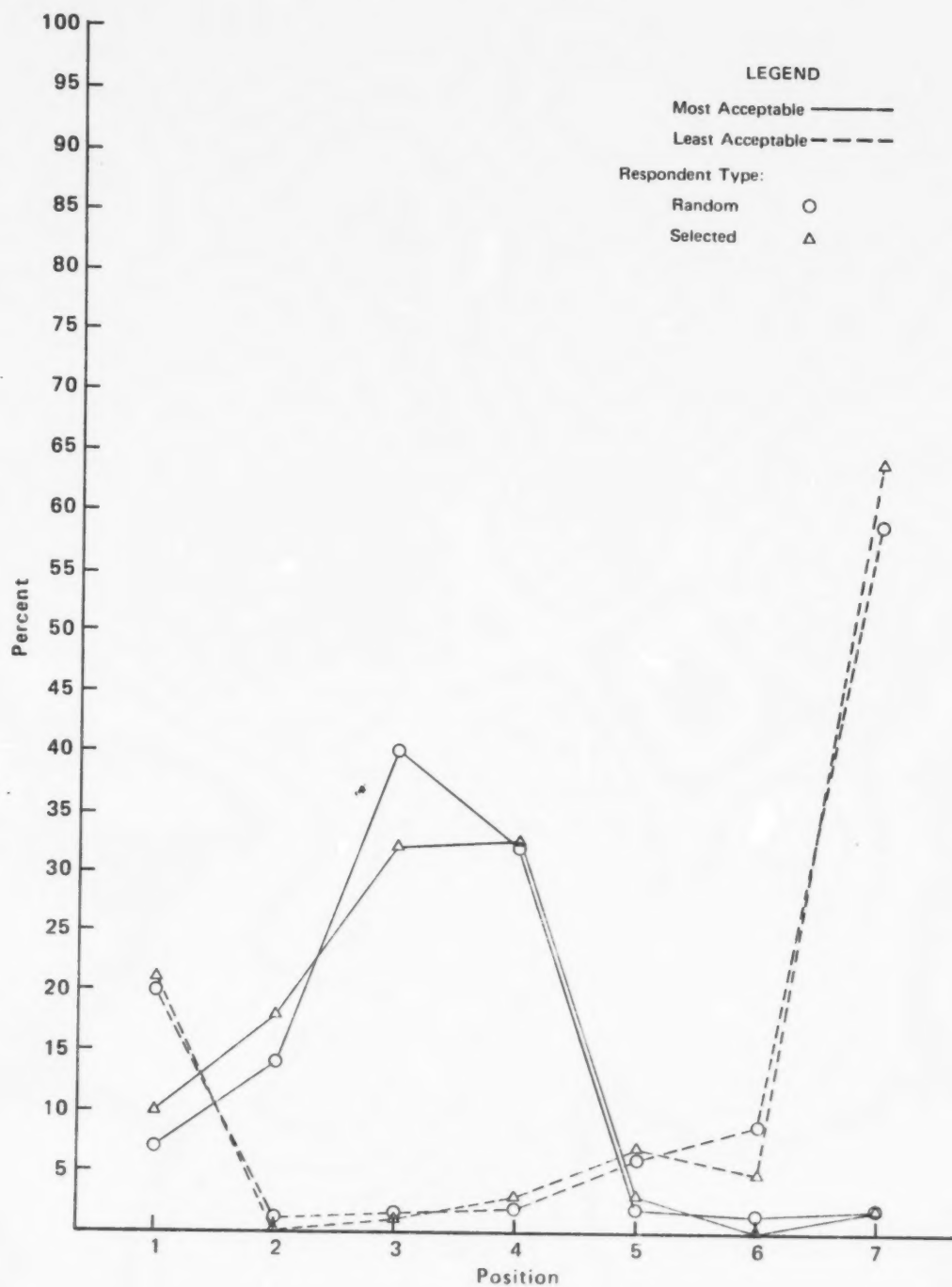


Figure 6. Percent of Sample Selecting Each Social Judgment Scale Position as Either Most or Least Acceptable: Total Random and Selected Samples

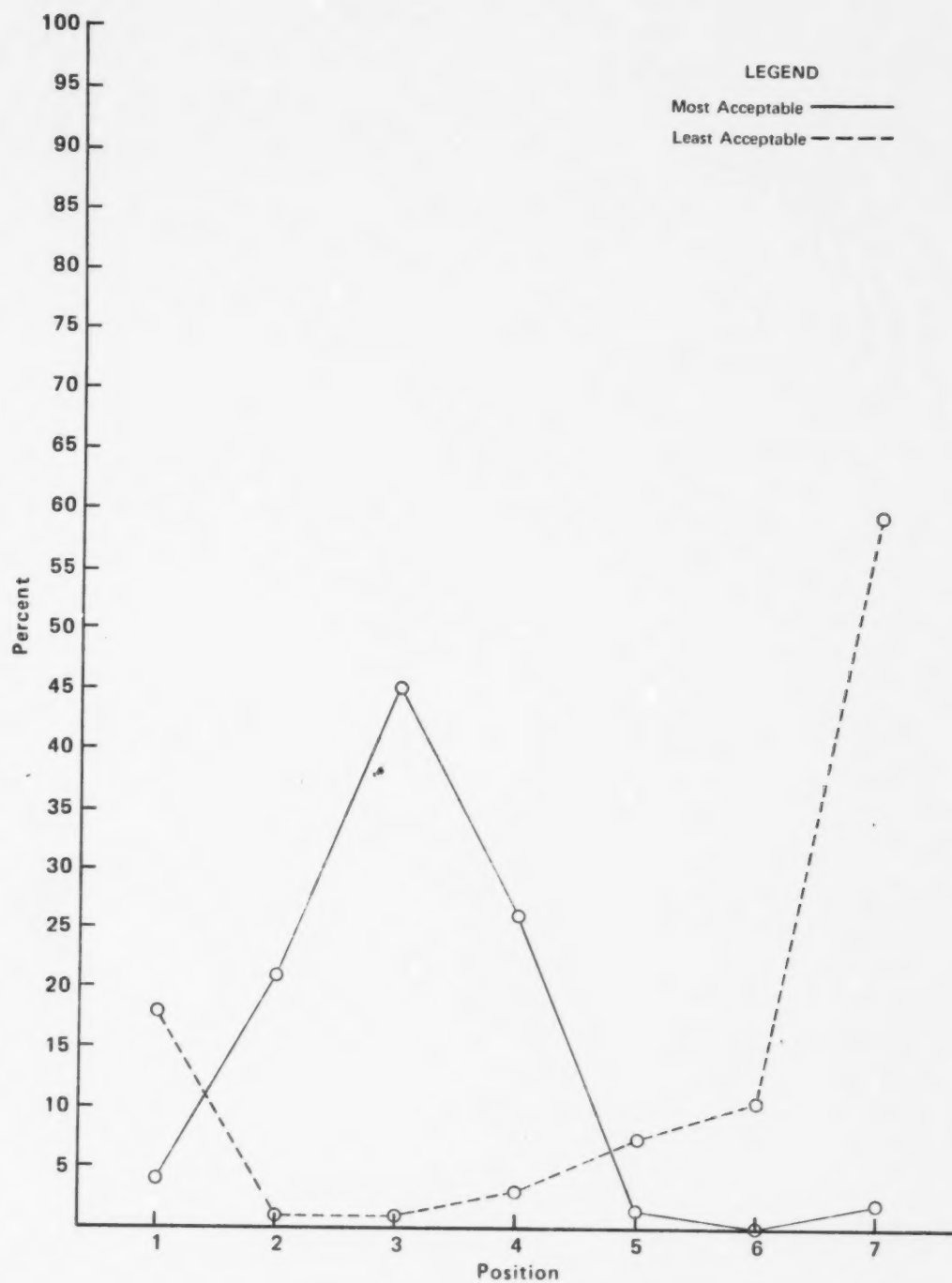


Figure 7. Percent of Sample Selecting Each Social Judgment Scale Position as Either Most or Least Acceptable: Polk County, Texas

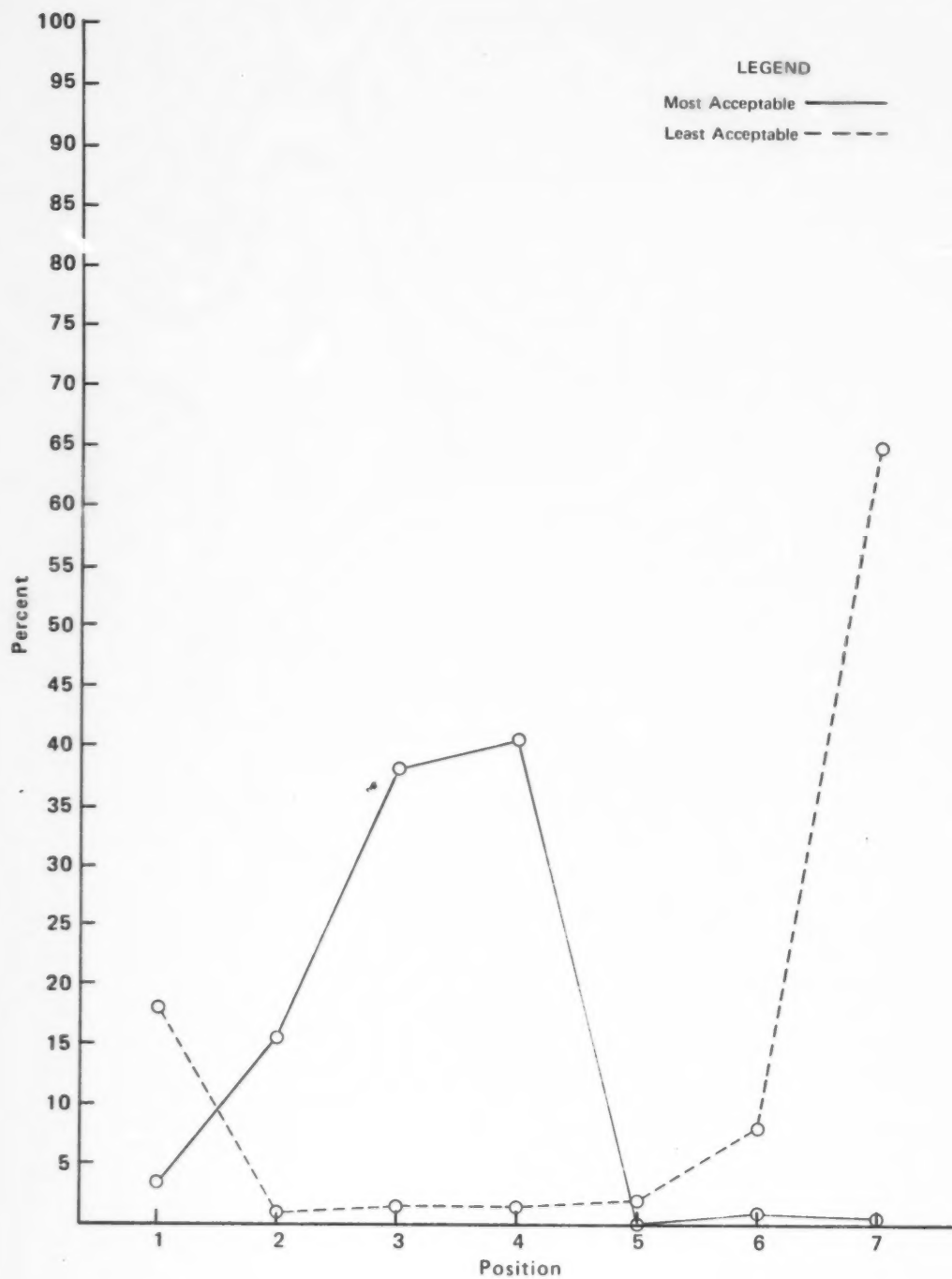


Figure 8. Percent of Sample Selecting Each Social Judgment Scale Position as Either Most or Least Acceptable: Sumter County, Alabama

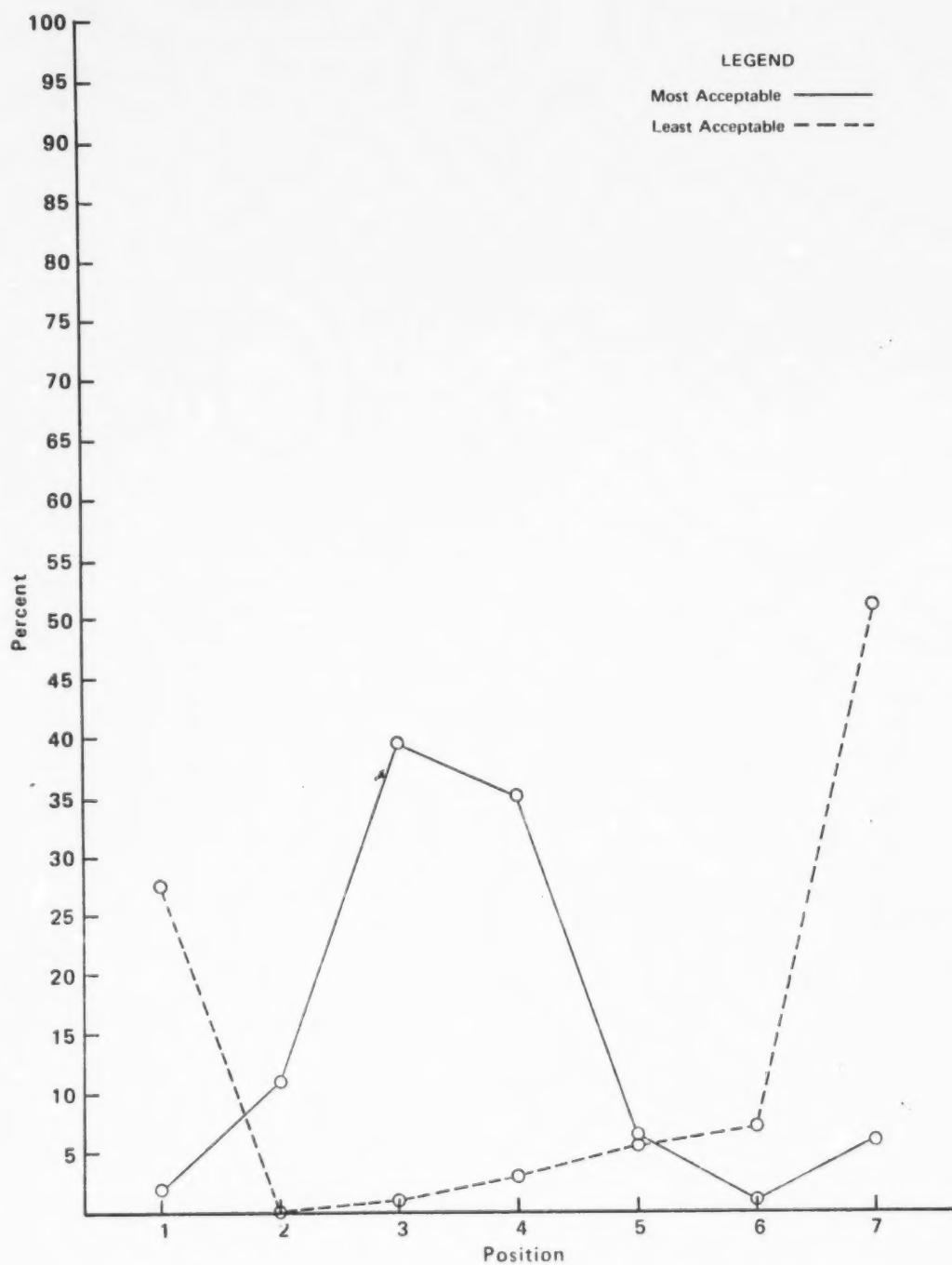


Figure 9. Percent of Sample Selecting Each Social Judgment Scale Position as Either Most or Least Acceptable: Sussex County, New Jersey

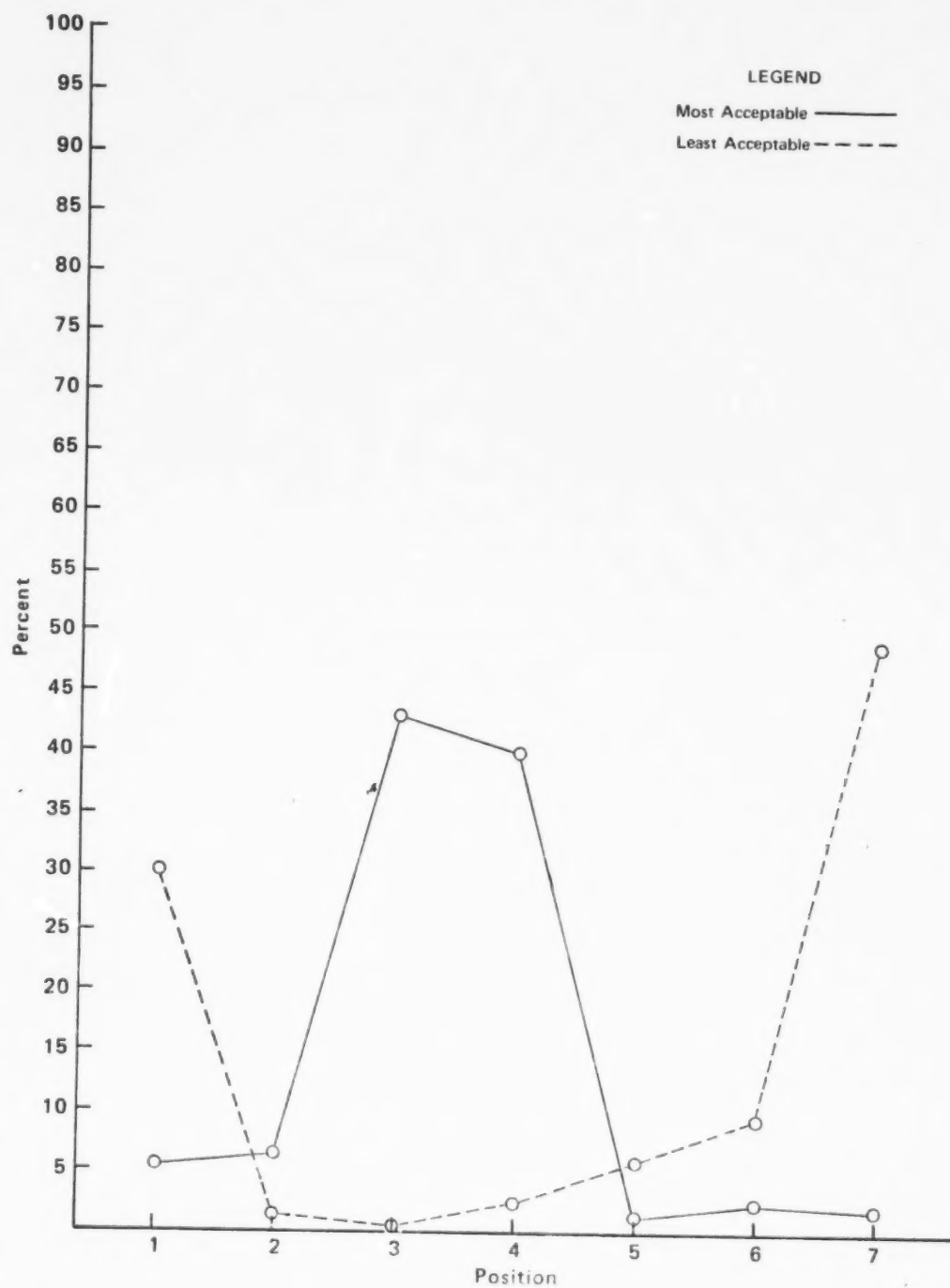


Figure 10. Percent of Sample Selecting Each Social Judgment Scale Position as Either Most or Least Acceptable: Ogle County, Illinois

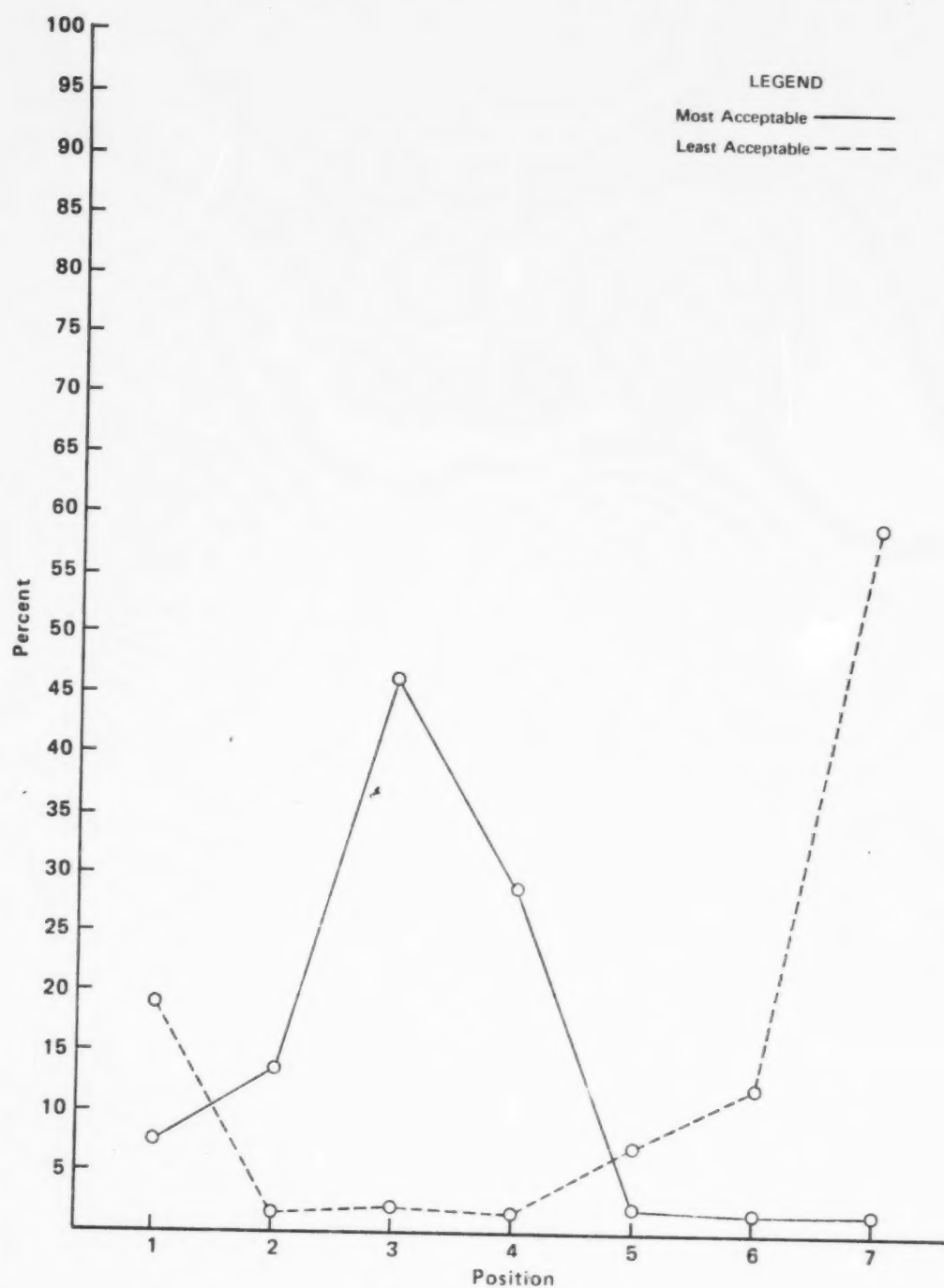


Figure 11. Percent of Sample Selecting Each Social Judgment Scale Position as Either Most or Least Acceptable: Benton County, Washington

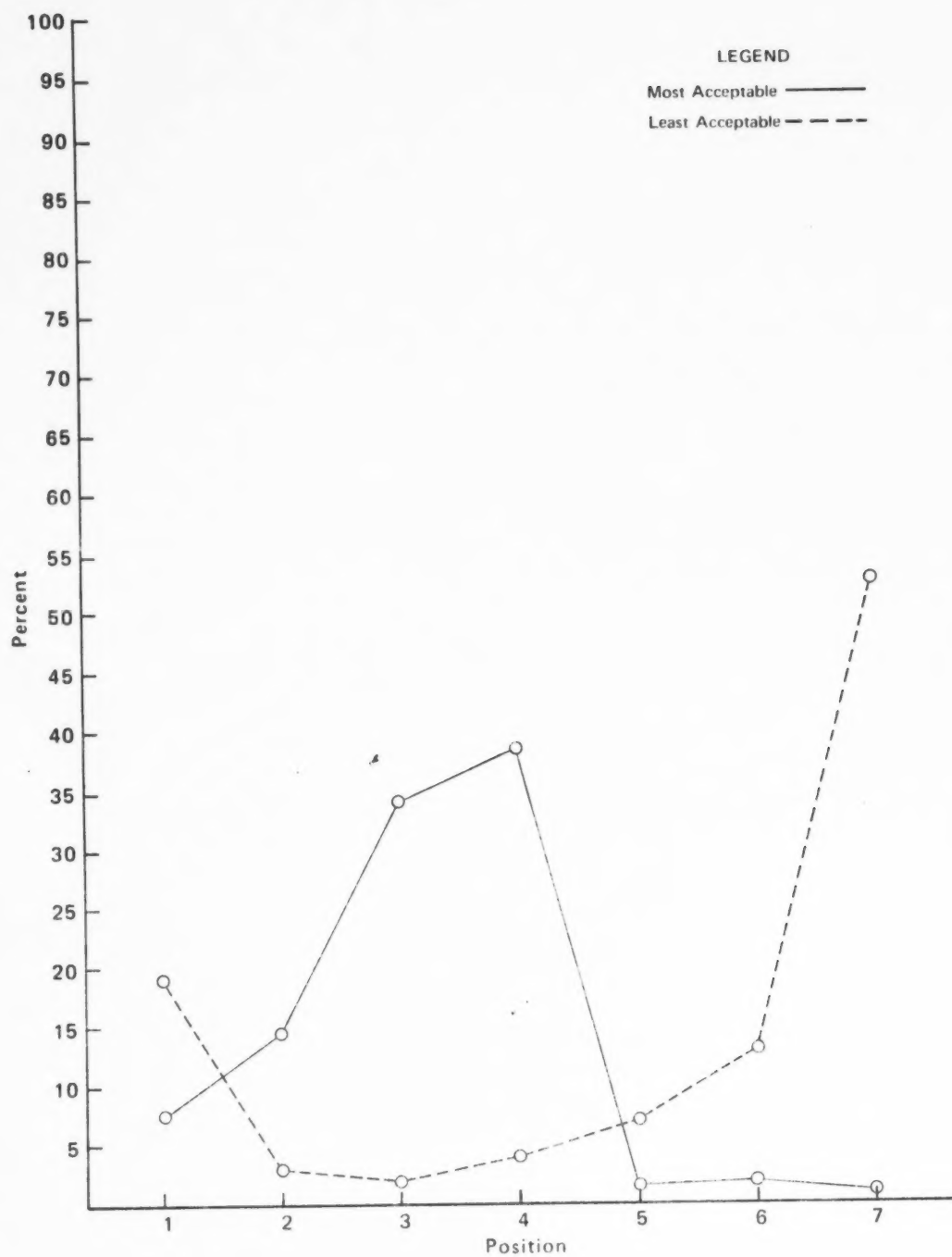


Figure 12. Percent of Sample Selecting Each Social Judgment Scale Position as Either Most or Least Acceptable: Franklin County, Massachusetts

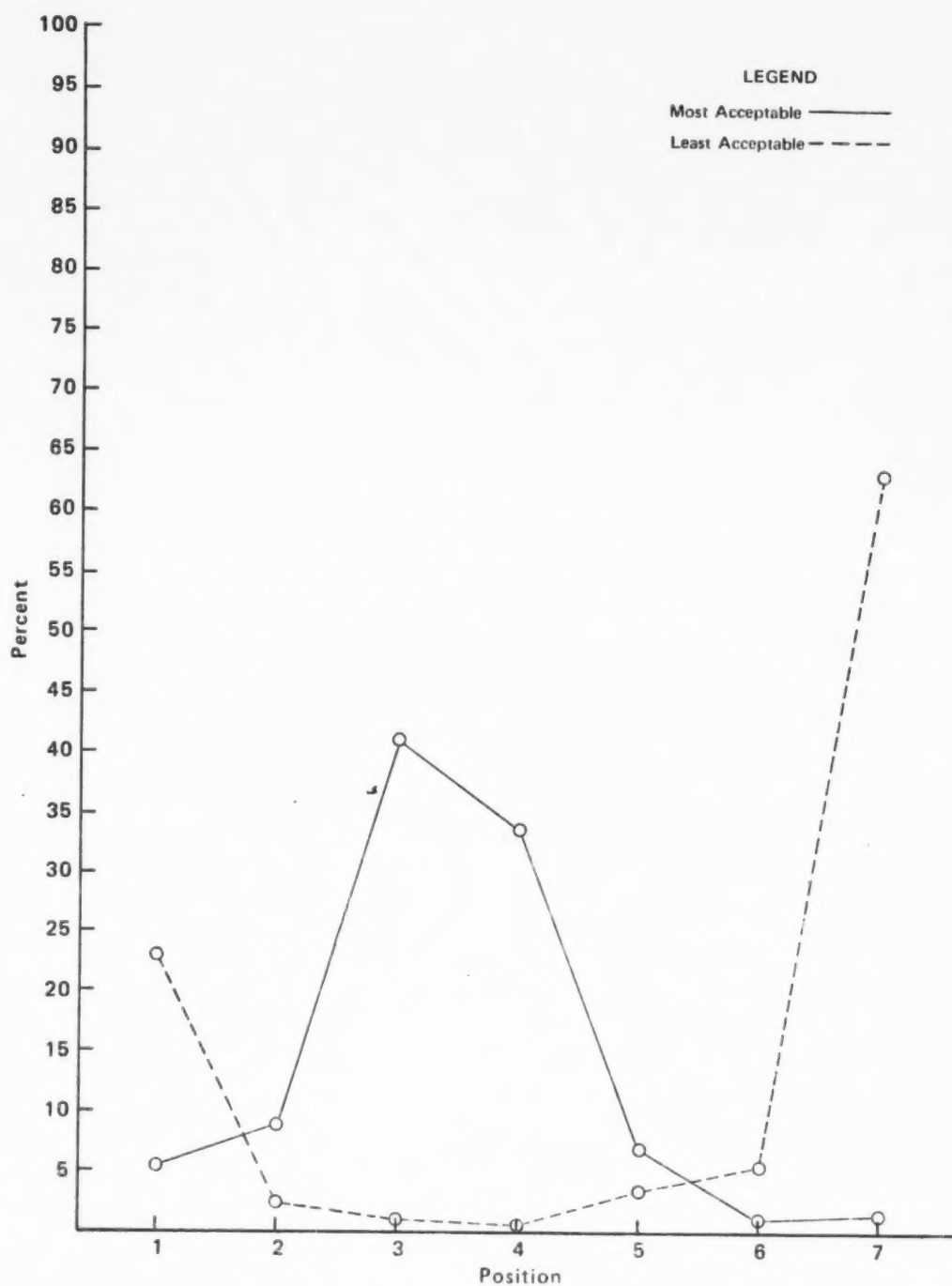


Figure 13. Percent of Sample Selecting Each Social Judgment Scale Position as Either Most or Least Acceptable: Montgomery County, Pennsylvania

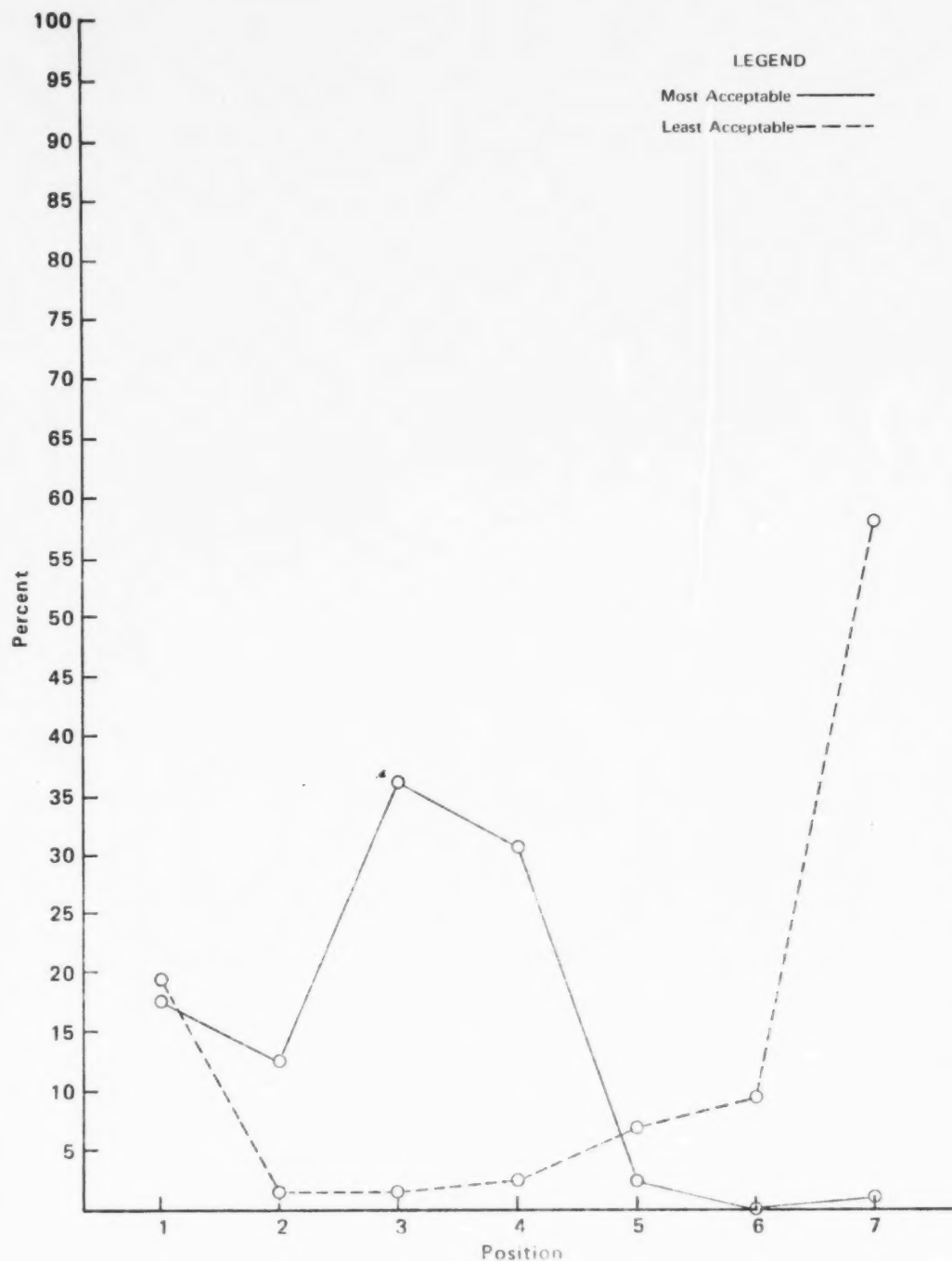


Figure 14. Percent of Sample Selecting Each Social Judgment Scale Position as Either Most or Least Acceptable: Harris County, Texas

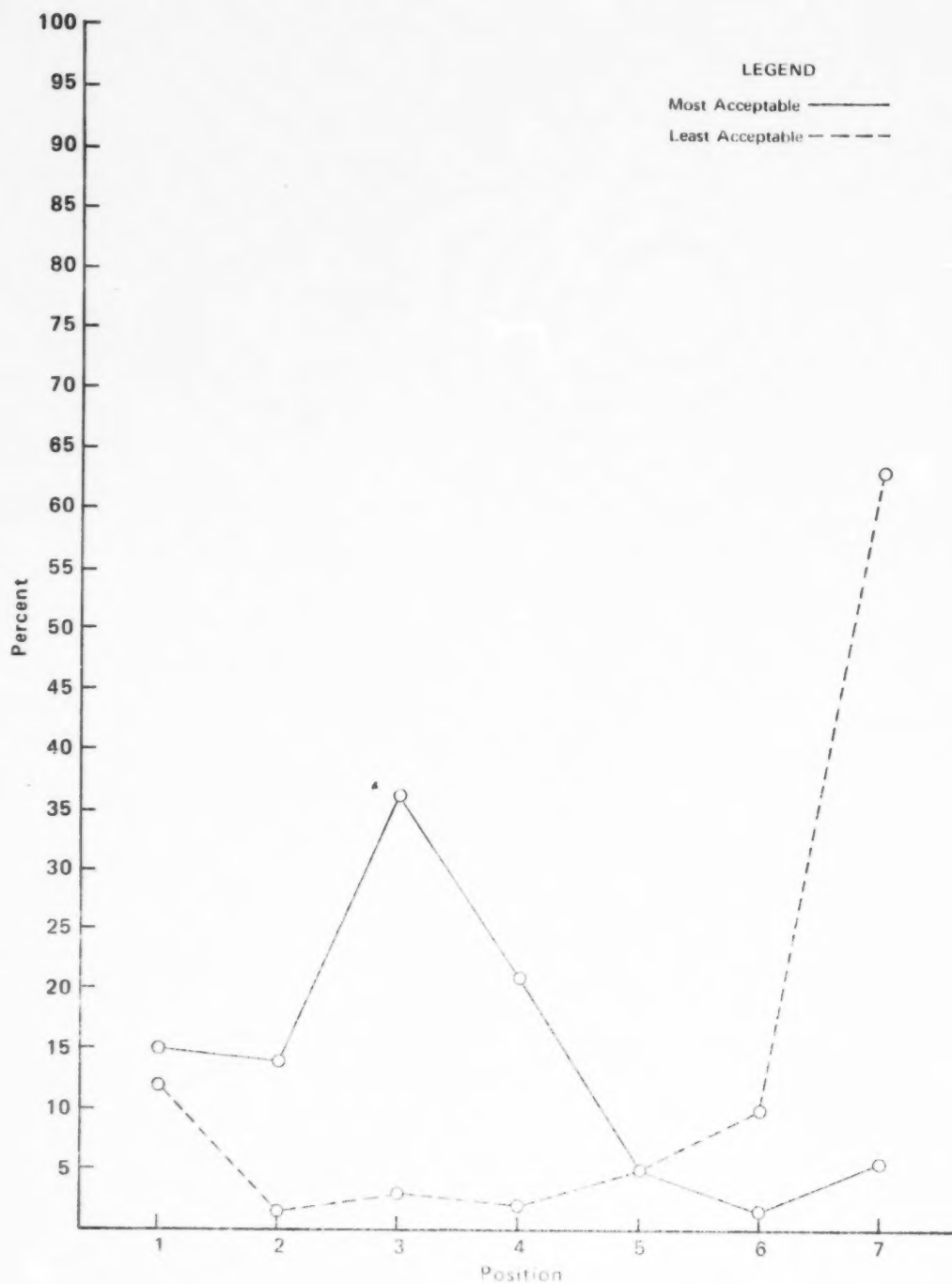


Figure 15. Percent of Sample Selecting Each Social Judgment Scale Position as Either Most or Least Acceptable: Wayne County, Michigan

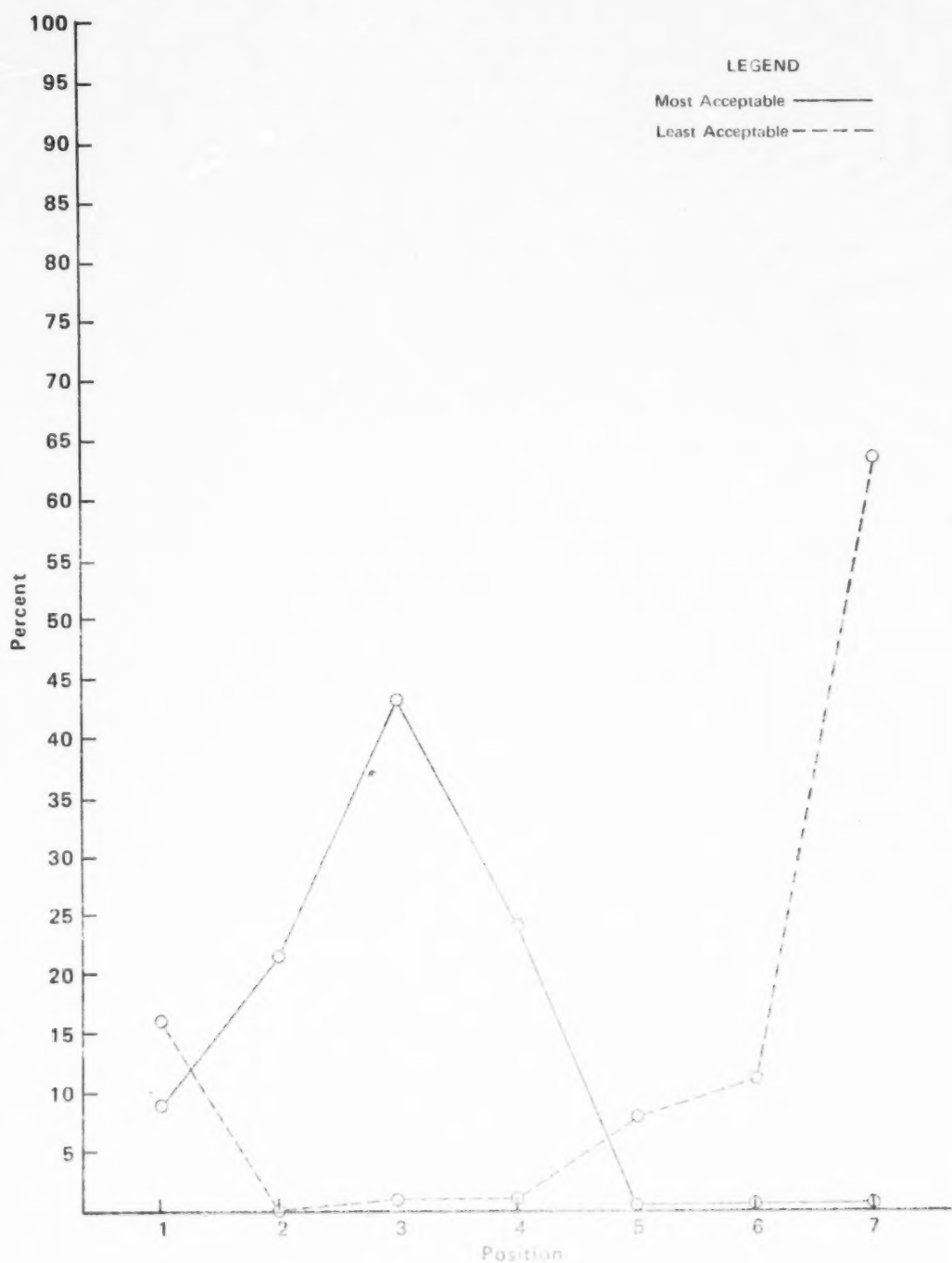


Figure 16. Percent of Sample Selecting Each Social Judgment Scale Position as Either Most or Least Acceptable: Kern County, California

Appendix F
DESCRIPTIONS OF AID ANALYSIS RESULTS AND
VARIABLE CATEGORIES

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DESCRIPTIONS OF AID ANALYSIS RESULTS AND VARIABLE CATEGORIES

The groups in the Automatic Interaction Detection (AID) analysis tree structure are obtained in the following way. The program first divides the entire sample into two groups according to one of the potential predictor variables included in the analysis. (Potential predictor variables *cannot* be included as continuous variables. Before a continuous variable can be included, it must be categorized. It is recommended that no more than seven categories be used for any given variable.) The decision rule that the program uses to make such a split is that there be a significant reduction in errors of prediction over and above the errors associated with predicting the criterion mean alone for all observations. One or the other, or both, of the two groups thus formed may again be split into two additional groups, if this will further reduce prediction errors significantly. This procedure continues until (a) the total sample has been divided into a series of mutually exclusive subgroups (i.e., every observation is a member of one and only one unique subgroup), and (b) there can be no further appreciable reduction in error variance.

Following are descriptions of the categories of each variable that the AID analysis used to subdivide the entire sample. Corresponding to each category or group of categories for each variable are the conceptual descriptions that appear in the AID tree structure (Figure 4). The AID descriptions correspond to the way in which each variable was dichotomously split during the analysis. The variables, with the exception of the intermediate criterion variable, are discussed in the order in which they appear in Table 19.

Environmental Concern. Responses to Question 1, "How concerned are you about environmental issues and ecology?" comprised this variable. The response categories and the splits from the corresponding descriptions in the AID analysis (parenthetical numbers in the AID columns correspond to the variable categories) follow.

Categories	Descriptions	AID Descriptions of Split ¹	
		First Split	Second Split
5	Very Concerned	Very Concerned (5)	
4	Concerned	Ranged downward from moderate level of environmental concern (1-4)	Concerned (4)
3	Fairly Concerned		Fairly concerned about the environment (1-3)
2	Not Very Concerned		
1	Not Concerned at All		

Necessity of NDS to County. The respondents were asked (Question 32) to choose, from among a set of seven statements, the one statement that best represented their position about the necessity of an NDS being built in the county. These seven statements (used as

¹This variable was the only one used in more than one split.

categories in the AID analysis) and the tree structure descriptions are as follows:

<u>Categories</u>	<u>Descriptions</u>	<u>AID Descriptions of Split</u>
1	Locating a Regional Processing Facility here is <u>absolutely essential</u> to our county.	Feels an NDS is necessary for the county (1-3)
2	Locating a Regional Processing Facility here <u>will best serve</u> our county.	
3	While it is not easy to decide, our county <u>probably will benefit</u> if a Regional Processing Facility is located here.	
4	Considering our county, it is <u>hard to decide</u> whether or not it is wise to locate a Regional Processing Facility here.	Feels an NDS is not necessary for the county (4-7)
5	While it is not easy to decide, our county <u>probably will suffer</u> if a Regional Processing Facility is located here.	
6	Locating a Regional Processing Facility here <u>will hurt</u> our county.	
7	Locating a Regional Processing Facility here <u>will be extremely bad</u> for our county.	

The responses to the above alternatives (categories) constitute the most acceptable social judgment scale score.

Belief Concerning NDS Impact on Property Values. Responses to Question 30, "If a Regional Processing Facility were to be built in this county, what do you think would happen to property values here?" constituted the data for this variable. The response categories and corresponding AID descriptions are as follows:

<u>Categories</u>	<u>Descriptions</u>	<u>AID Descriptions of Split</u>
3	Increase	Believes property values will stay same or increase (2-3)
2	Stay the Same	
1	Decrease	Believes property values will decrease (1)

Educational Level. The respondents were queried as to the highest level of education they had attained (Question 49). The following are the response categories and the AID interpretive descriptions.

<u>Categories</u>	<u>Descriptions</u>	<u>AID Descriptions of Split</u>
1	Elementary School (1-8)	High school graduate or less (1-3)
2	Some High School	
3	Graduate High School	
4	Some College	Some college or college graduate (4-5)
5	Graduate College	

Median Income Level. The median income level for each county surveyed was obtained from 1970 census data publications of the U.S. Bureau of Census. Using a relative standard, the following categories of median income were established:

<u>Categories</u>	<u>Descriptions</u>	<u>AID Descriptions of Split</u>
1	Less than or equal to \$6,000	County median income less than or equal to \$6,000 (1)
2	Greater than \$6,000 but less than or equal to \$10,000	County median income greater than \$6,000 (2-3)
3	Greater than \$10,000	

Acceptable Waste-Carrying Traffic Proximity Index. This measure represented the summated ratings of the individual's willingness to have waste-carrying traffic to an NDS move (a) through the community, (b) within one mile of the community, and (c) within five miles of the community (Question 26). Each rating of acceptable proximity was made on a seven-point scale, with 7 indicating extreme willingness and 1 indicating extreme unwillingness. Thus, the potential score range of the index was from 3 to 21. The following categories were established for the traffic proximity index:

<u>Categories</u>	<u>Descriptions</u>	<u>AID Descriptions of Split</u>
1	Scores from 3-8	Willingness moderate or less to have waste traffic near community (1-3)
2	Scores from 9-13	
3	Scores from 14-17	
4	Scores from 18-21	More than moderately willing to have waste traffic near community (4)

Reported Incidence of Large Plants Nearby. This measure was derived for each of the counties through individual response to Question 3, "Are there any large plants near here, such as industrial, manufacturing, or chemical processing plants?" Counties were categorized according to the percentage of respondents in each county answering "Yes" to this question.

<u>Categories</u>	<u>Descriptions</u>	<u>AID Descriptions of Split</u>
1	Less than 25% of county's respondents answered "Yes."	Less than or equal to 50% of respondents in county report large plant nearby (1-2)
2	25-50% of county's respondents answered "Yes."	
3	50-75% of county's respondents answered "Yes."	More than 50% of respondents in county report large plant nearby (3-4)
4	Greater than 75% of county's respondents answered "Yes."	

Population Change. The percent change in population from 1960 to 1970 was calculated for each of the counties surveyed. Using a relative standard, the following categories were derived that reflect various population shifts.

<u>Categories</u>	<u>Descriptions</u>	<u>AID Descriptions of Split</u>
1	Counties with negative or no change in population	Negative, no change in county population or large positive population change (1 and 4)
2	Counties experiencing from 0 to +10% population change	
3	Counties experiencing from +11 to +25% population change	County population change moderately positive (2-3)
4	Counties with population shift greater than +25%	

Age. The reported age (Question 48) of the respondent constituted the data for this variable.

<u>Categories</u>	<u>Descriptions</u>	<u>AID Descriptions of Split</u>
1	Under 20	Younger than 40 (1-2)
2	In your 20s	
3	In your 30s	in 40s or older (4-7)
4	In your 40s	
5	In your 50s	
6	In your 60s	
7	70 or Over	

Primary Income Source. This variable represents the ratio of the manufacturing/industrial payroll to the non-manufacturing/non-industrial payroll. This variable or ratio was computed

for each county. Using a relative standard, categories were established that reflected the predominance of industry as the income source of the county.

<u>Categories</u>	<u>Descriptions</u>	<u>AID Descriptions of Splits</u>
1	Ratio less than or equal to .50	Main income source primarily non-industrial or
2	Ratio greater than .50 but less than or equal to 1.00	main income source primarily industrial (1 and 3)
3	Ratio greater than 1.00	Main income source mixed industrial and non-industrial (2)

Membership in Organized Groups. Respondents were asked to indicate whether or not they belonged to any civic or fraternal groups (Question 9).

<u>Categories</u>	<u>Descriptions</u>	<u>AID Descriptions of Splits</u>
1	Yes	Member of an organized group (1)
2	No	Not a member of an organized group (2)

Recommended Intermediate Criterion Variable (ICV) Score Categories. In contrast to candidate predictor variables, the dependent or criterion variable entered into an AID analysis must be either continuous or dichotomous. The ICV was continuous and was entered in the analysis in that form. The ICV, as discussed in the text, was based upon a summation of the weighted scores for each of three composite measures. The three component variables were weighted so as to equalize their theoretical ranges. These measures and the weighting coefficients for each are as follows:

<u>Composite Measure</u>	<u>Weighting Coefficient</u>
1. Summative Attitudinal Measure (SAM)	1.0
2. Action Potential Index (API)	9.3
3. General Activity Level (GAL)	315.0

The ICV, a weighted summation of the above three variables, has a potential score range of from 403 to 4706.

If the ultimate criterion variable (actual citizen reaction to NDSs) should become available in the future, the following categorization of the ICV is recommended for use in an AID analysis as one of the predictor variables.

<u>Category Score</u>	<u>Description of Score Ranges for Each Category</u>
1	<1501
2	1501-1923

<u>Category Score</u>	<u>Description of Score Ranges for Each Category</u>
3	1924-2346
4	2347-2769
5	2770-3192
6	3193-3615
7	>3615

Such an analysis using the above categories would substantiate the assumption of a strong ICV-ultimate criterion variable relationship.

It should be noted that the use of the suggested categories for the ICV in an AID analysis is predicated upon the assumption of a platykurtic (flat-topped) score distribution. Such a distribution was found for the ICV in this project. Should a "flat-topped" distribution fail to be obtained in another sample, appropriate modifications should be made such that each category contains an approximately equal proportion of respondents.